AN OBSERVATIONAL STUDY OF FARM TOURISM AT SMALL-SCALL FARMS ON THE HAWAIIAN ISLAND OF OAHU

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Wen Yu

Thesis Committee:

Daniel M. Spencer, Chairperson
Juanita C. Liu
Patricia G. Steinhoff
Linda J. Cox

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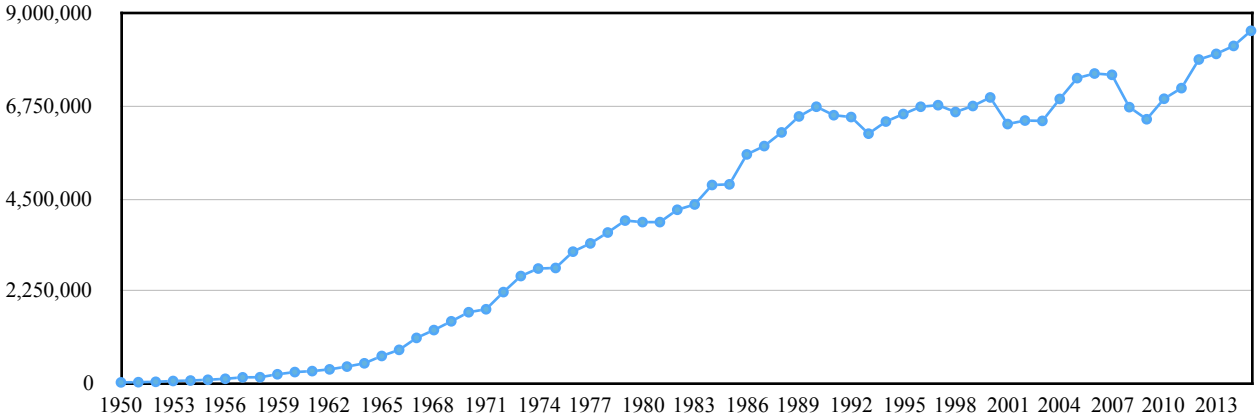
CHAPTER 1: INTRODUCTION

The total number of visitor arrivals in Hawaii has grown dramatically since the 1950s (Figure 1). As islands where the capacity was built to accommodate the relatively isolated and closed island eco-system in terms of economy, environment and socioculture, Hawaii has experienced huge changes impelled by this massive growth of visitor arrivals.

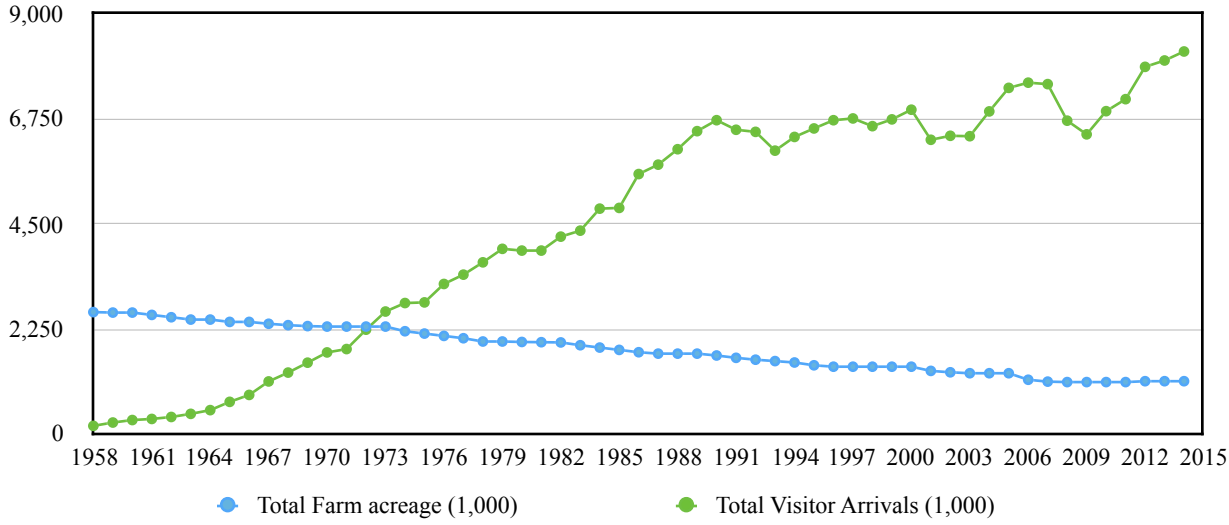
Figure 1. Total Visitor Arrivals in Hawaii, 1950-2015



Source: Data-warehouse, State of Hawaii, Department of Business, Economic Development & Tourism

The economic influence of tourism development on Hawaii can be partially illustrated by the changes of agriculture industry. Before 1950, the principal industry in Hawaii was agriculture. The rice, sugar and pineapple plantations operated by non-Hawaiians occupied most of the land, growing important export goods (Philipp, 1953). Today, the visitor and defense industries are the top contributors to the economy, followed by raw sugar and molasses and fresh and processed pineapple (DBEDT, 2017). Reflecting these economic realities, the total acreage of land being farmed in Hawaii has gradually declined since the 1950s, while the number of visitor arrivals has generally increased (Figure 2).

Figure 2. Visitor Arrivals Versus Total Farm Acreage in Hawaii, 1958-2014



Source: Data-warehouse, State of Hawaii, Department of Business, Economic Development & Tourism

The decrease of farmland acreage is one of the impacts that can be easily observed, while the environmental and sociocultural impacts of the massive growth of visitors are more subtle, yet more fundamental and determinant. The change in landscape due to the development of hotels and resorts, visitors' disturbance of wildlife and their natural habitats, the intrusiveness of visitors entering into and exploring local residential communities and forests, etc., have been gradually altering the sociocultural and environmental structures of the agriculture industry as well.

The intersection of the agriculture and tourism industries was once observed as one of competition for labor, land and capital resources (Cox & Fox, 1993). However, as Cox and Fox (1993) discovered, the further development of the tourism industry in Hawaii generated new demand for agricultural products, and in response to this new demand, farmers shifted their farming tradition and started producing new crops and interacting with tourists.

The linkages between agriculture and tourism found in Cox and Fox's (1993) study was twofold, linking through agricultural production and agricultural services. In the first scenario, tourists came to Hawaii carrying their home-country tastes and trendy diet, and creating new demands for salads, and a variety of vegetables, meats, fishes; on the other hand, tourists were also interested in buying "high value specialty products", like tropical fruits, Hawaiian coffee and macadamia nuts (Cox, Fox & Bowen, 1995). In the second scenario, agricultural landscapes and ornamental vegetation provided tourists with an enjoyable ambience, and tourists were also interested in visiting agriculturally based attractions, like botanic gardens, farms and ranches, flower nurseries and coffee processing plants.

These linkages presented an economic and market-oriented perspective of the intersection between agriculture and tourism industries in Hawaii. However, the sociocultural and environmental perspective of this intersection was omitted. Questions like how farmers were responding to the new demands generated by the tourism industry and how tourists were interacting with agricultural production and services remain unanswered. As suggested by Cox and Fox (1993), the linkages between agriculture and tourism were more intricate than previously identified, and in-depth examination and clarification of these linkages were greatly needed.

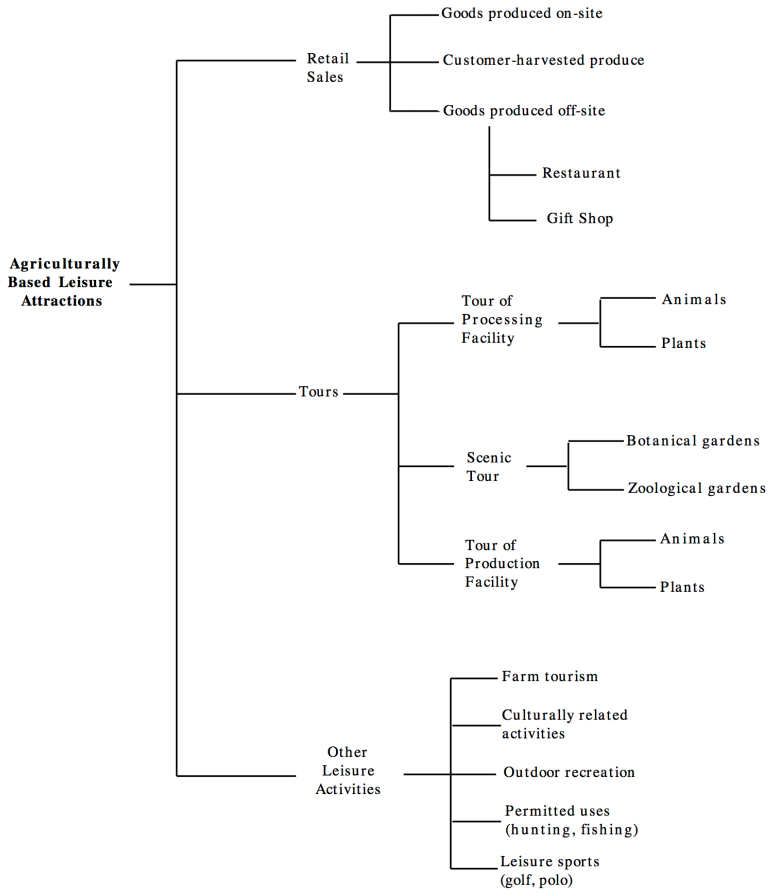
Accordingly, this thesis seeks to create an enlarged understanding of the nature of the interactions between visitors and farmers, and the practices that farmers develop in response to visitors' demands. It also explores the use of qualitative field research methods in this context, and aims to provide an empirical sociocultural perspective to help scholars understand the

linkages between the agriculture and tourism industries in a way different from the positivist paradigm.

1. The Proposition of Farm Tourism

According to Cox and Fox's (2003) study, as shown in Figure 3, farm tourism was positioned as a subset of *Other Leisure Activities*, and was identified as farmers inviting tourists to stay at their farms for a fee. Farm tourism was considered different from *Retail Sales*, like purchasing on-site and off-site produced goods and customer-harvested produce; *Tours*, like visiting processing facilities, botanic gardens, production facilities; and *Other Leisure Activities*, like doing culturally related activities, hunting and fishing. In this regard, farm tourism did not theoretically and legally exist in Hawaii given the strict zoning policy that no one other than a certain number of farmers within a certain farmers-to-acreage ratio was allowed to stay on agriculture zoned land.

Figure 3. Types of Agriculturally Based Leisure Attractions



Source: Cox and Fox (2003)

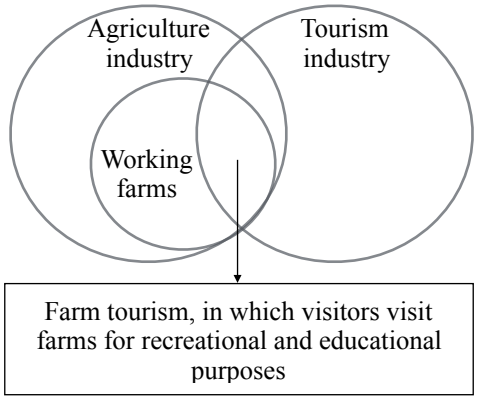
However, in real life, farms' functions have expanded, with activities such as on-site goods purchasing, production tours and Hawaiian culture demonstrations that were previously conceptualized as parallel to farm tourism happening at a single farm. In this thread of thought, the concept of farm tourism that was previously considered to only pertain to farm-stays needs to be re-defined and re-configured to capture the importance of farms in the whole agricultural system and the essence of its multifunctional role as both food and service providers (United Nations Conference on Trade and Development, 2013).

Therefore, to understand the nature and practices of farm tourism in Hawaii and for purposes of this thesis, the term is re-defined as the provision of accommodation and/or recreational and educational activities as supplementary to farming activities on a working farm (Busby & Rendle, 2000). To understand the concept of farm tourism, it is important to re-visit another concept, agri-tourism, and set boundaries for both concepts.

Although in the literature and in the vernacular, the terms of farm tourism and agri-tourism are commonly used interchangeably due to the predominant component of on-farm activities in the agri-tourism context, in this study, the term farm tourism is distinguished from agri-tourism. Agri-tourism is considered the broader intersection of the agriculture and tourism industries, including off-farm activities like farmers' markets, farm festivals, etc. and Bed & Breakfast activities that use farmland as a setting independent of actual farming activities, such as historic houses on farms, leasing farmland to hunters, etc. (Phillip, Hunter, & Blackstock, 2010; Propst & Combrink, 1991). Thus, farm tourism is considered a subset of agri-tourism.

The conceptualization of farm tourism as used in this thesis, located at the intersection of the agriculture industry, tourism industry, and working farms that visitors visit for recreational and educational purposes, is illustrated in Figure 4.

Figure 4. Definition of Farm tourism in This Study



2. Rationale for the Study

This study focuses primarily on the relationships between farmers, visitors and farms at small-scale farms on the Hawaiian island of Oahu. Attention is given to the host-guest relationship, for it is not fully examined and understood. As Netto remarked,

> [t]he study of tourism should help to comprehend the role of human beings in the context of their trips and the search for new solutions to old problems, such as the relationship between guests and hosts, which is often discussed, but has achieved little advances in the practical terms (Netto, 2009).

Moreover, farm tourism is undergirded by the relationship between hosts and guests, in which farmers digress from their usual routines to "serve" visitors, and visitors leave their comfort zones to explore "unusual" farm lands. This point of view was implied by Nash (1989) that, to assist tourists in a "foreign" place, some provision for their leisure activities must be made, and "investigations of the consequences of tourism in tourist areas ought to begin from an analysis of the individual and collective adaptations made by a host people in regard to these

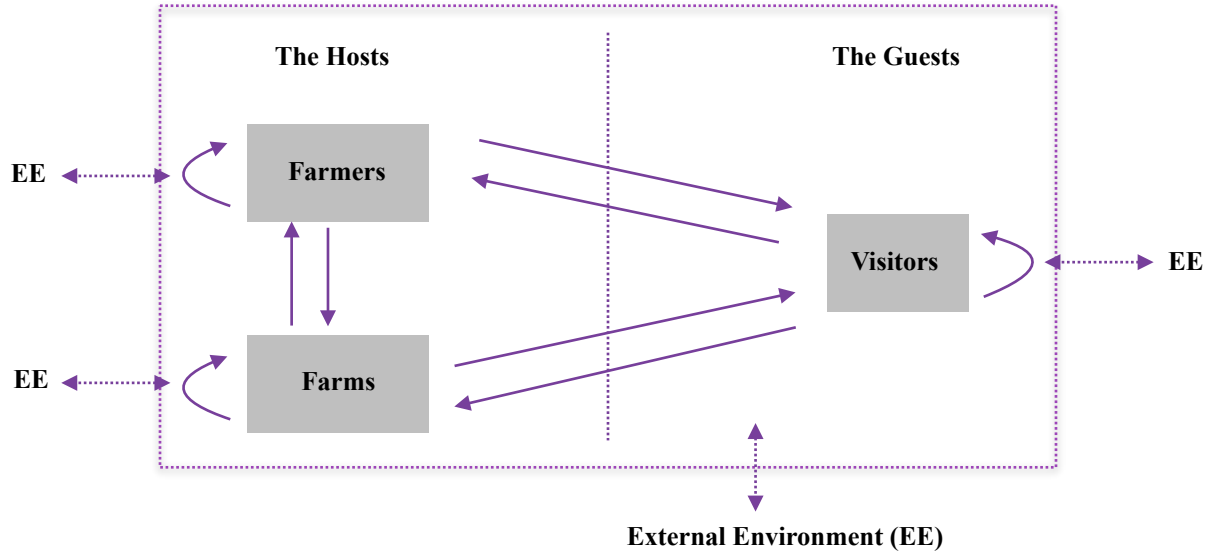
inevitable service functions". In this sense, to understand the nature and the practices of farm-tourism, one key is to investigate the triangular relationships between farmers, visitors and farms.

Attention is also given to the interplay between farm tourism and its external environment comprised of economic, political, socio-cultural, technological and other forces. The understanding of farm tourism should not be isolated within either the agriculture or tourism regimes. Farmers and visitors as social beings are constantly influenced by external factors like social norms and movements, culture, customs, education and technology, which may have no direct relations to agriculture or tourism but affect individuals' belief and self efficacy and eventually their decision-making pertaining to farm tourism. Similar external factors also affect farm lands and the utilization of farm resources, and hence affect the development of farm-tourism.

These relationships are further illustrated in Figure 5. Farmers and farms comprise the "hosts" and visitors comprise the "guests". The interactions between the hosts and guests, as well as their interactions with the external environment, constitute the framework of farm tourism. This framework constitutes the conceptual basis, and provides the structure, for this thesis and the presentation of its results.

To investigate these relationships, small-scale farms on the island of Oahu are taken as the setting for this study. The reasons are twofold: most farms in Hawaii contain less than 10 acres and Oahu has the highest percentage of small-scale farms, plus Oahu is the most populated and visited island in Hawaii.

Figure 5. Relationships between Farmers, Farms and Visitors and Their Interplay with the External Environment



As shown in Table 1, over 60 percent of farms in Hawaii contain less than 10 acres (USDA, 2014), which especially holds true for the island of Oahu. In addition, "agri-tourism" farms constitute a small percentage of the farm on all major Hawaiian islands and such farms generate the most value on Oahu (Table 2). Therefore, given limited budget and resources, Oahu farms that were under 10 acres, open to the public, and had regular or occasional direct interactions with visitors through a variety of activities for recreational and educational purposes were chosen as the setting for the study.

As previous studies show, farm tourism is commonly adopted by small-scale farms (Barbieri, 2013; Choo & Petrick, 2014; Hernández-Mogollón *et al.*, 2011; Lobo, Goldman, Jolly, Wallace, Schrader & Parker, 1999). However, farm tourism is still poorly understood due to a lack of data because small, rural tourism enterprises do not wish to participate in tourism research (Busby & Rendle, 2000). Nevertheless, Settachai (2008) suggested that "small-scale,

Table 1. The Number of Farms with Less Than 10 Acres in Hawaii by Counties 2007/2012

	Farms with Less than 10 acres	Farms in Total	Percentage of Small-scale Farms
State of Hawaii 2007	4,813	7,521	64%
State of Hawaii 2012	4,412	7,000	↓63%
Hawaii Island 2007	2,865	4,650	62%
Hawaii Island 2012	2,610	4,282	↓61%
Oahu 2007	699	967	72%
Oahu 2012	743	999	**↑74%**
Kauai 2007	483	748	65%
Kauai 2012	348	591	↓59%
Maui 2007	766	1,156	66%
Maui 2012	711	1,128	↓63%

Source: 2012 Census of Agriculture; 2007 Census of Agriculture, USDA

Table 2. The Number and Value of Agri-tourism in Hawaii by Counties 2012

	State of Hawaii	Hawaii Island	Oahu	Kauai	Maui
Number of agri-tourism farms	233 (3%)	106 (4%)	36 (5%)	39 (11%)	16 (2%)
Average value of agri-tourism per farm	$76,258	$9,708	**$179,139**	$99,333	$95,813

Source: 2012 Census of Agriculture, USDA

locally-owned tourism development tends to benefit the community as it leads to the revitalization of the local economy, the improvement of the physical environment, and the preservation of historic buildings". Therefore, the study of small-scale farms is not only suitable for the nature of this study, but also contributes to a body of knowledge of farm tourism and small, rural tourism enterprises.

3. Study Approaches

Given the exploratory nature of the study, qualitative, rather than quantitative research methods were employed. Such methods have been employed to generate insightful construction of a shared understanding of farm tourism (Arroyo, Barbieri and Rich, 2013).

To fully understand the nature and practices of farm tourism on small-scale farms on the Hawaiian island of Oahu, qualitative field research methods, including participant observation and semi-structured interviews, were employed. These methods allowed the author to capture the special context that the farms were facing and the interactions between farmers and visitors, and to generate an ethnological manuscript and observation of the early development of the farms' contact with visitors, the tourism industry, and how various external factors were affecting surrounding communities in term of agricultural development.

4. Significance of the Study

The significance of this study is threefold: (1) it addresses and helps fill the gap in research on farm tourism in Hawaii; (2) it unveils the host-guest relationships at small-scale farms, manifested by the intersection between the agriculture and tourism industries, the two most dominant industries in Hawaii; and (3) it investigates the challenges and opportunities that small-scale farms face in developing farm tourism.

A keyword search on Google Scholar revealed that the number of publications relevant to "farm tourism" and "Hawaii" is zero. This void in research might be the result of the dearth of

farm tourism enterprises in Hawaii. Although, as aforementioned, the agricultural census statistics show significant growth in agri-tourism in Hawaii, due to the lack of a universal definition and recognition of either farm tourism or agri-tourism, the scattered and self-initiated farm tourism practices across farms in Hawaii are difficult to study. These gaps justify this study.

In addition to the research void within the tourism arena, it is also well-noticed that agriculture's stability per se, in other words, food security, is essential for an island economy, especially for Hawaii, where 85-90% of the food is imported (DBEDT, 2012). Moreover, the majority of its agricultural products are export-oriented, which further diminishes Hawaii's food security (DBEDT, 2012) and greatly increases the cost of living in, and visiting, the state. However, given the significant economic potential showed by agri-tourism (USDA, 2014) and the magnitude of tourist expenditures on food and beverage (20% of their total spending) (HTA, 2014), if more locally grown food, locally sourced restaurants and markets, and recreational farm activities could be made available to visitors, significant revenues could be returned to the local agricultural industry, thereby lessening economic leakage in Hawaii's visitor economy and possibly encouraging farms to shift their focus to the local market. This study was intended to contribute to a deeper understanding of this issue.

Regardless of the uncertainty of the future of farm tourism in Hawaii, this economic potential can only be fulfilled through the collective efforts of individual farms and the effectiveness of their practices. As aforementioned, small-scale farms comprise the majority of the agricultural system in Hawaii, which also holds true for the global agricultural system, in which "small-scale farming… provides a livelihood for about 2.6 billion people… cultivate[s]

approximately 50 per cent of the world's agricultural land, provid[es] an estimated 25 per cent of global cereal production and about half of total food production" (Hurni, Breu, Messerli and Portner, 2013). To enhance the success of such significant smallholders, the United Nation's recently released "Trade and Environment Review 2013" recommended the adoption of "a holistic approach in agricultural management", in which farms "provide quite a number of pubic goods and services (e.g. water, soil, landscape, energy, biodiversity, and recreation)" (United Nations Conference on Trade and Development, 2013). Farm tourism falls into the "recreation" category, together with the "landscape" that small farms offer to the public. This study sought to investigate the challenges and potentials associated with these new efforts to generate insights for small-scale farmers and practitioners in other sectors of the economy.

5. Goals and Objectives

The primary goal of this thesis is to dissect the key components of farm tourism, namely farmers, farms and visitors, and their interrelationships, as well as their interaction with the external environment, in Hawaii.

In accord with this stated goal, the objectives of the study are:

(1) To explore the nature of farmers engaged in farm-tourism on the Hawaiian island of Oahu, including their interrelations with farms and visitors.

(2) To explore the nature of small-scale farms engaged in farm-tourism on the Hawaiian island of Oahu, including their interrelations with farmers and visitors.

(3) To explore the nature of visitors engaged in farm-tourism on the Hawaiian island of Oahu, including their interrelations with farms and farmers.

(4) To explore how the external environment affects the development of farm-tourism on the Hawaiian island of Oahu.

(5) To discuss the implications of results and make recommendations on how farm tourism in Hawaii can be further developed and investigated.

6. Organization of the Study

In Chapter 2, the literature on themes of agri-tourism, farm tourism, rural tourism and their external environment is reviewed. First, the definitions of rural tourism, agri-tourism and farm tourism are reviewed and discussed, followed by a discussion of the dynamics of farm tourism. Then, attention is turned to the literature investigated on tourism from the farmers' and visitors' perspectives, respectively, and also the host/guest relationship. Thirdly, challenges, constraints and trends affecting farms' diversification are reviewed. Finally, insights and gaps identified from these past studies that justified and guide this research, are summarized and synthesized. In Chapter 3, qualitative field research methods used in this study, including data collection, data analysis and reliability and validity are introduced and discussed.

The results of the study are presented in Chapters 4 through 7. In Chapter 4, farmers' rejuvenation through interactions with other social groups, impelled by their opening the farms to the public, and the recognition and adoption of new identities and motivations for farm tourism,

are described. Chapter 5 identifies a new farm resource structure reflecting farms' multi-functionality and how this structure was configured through the practices and participation of farmers and visitors in the context of farm tourism. In Chapter 6, the nature of farm visitors, their impacts on the local food system, and their engagement with farmers and farm resources through farm tourism, are dissected. Chapter 7 discusses challenges and obstacles retarding the development of farm tourism on Oahu.

The concluding chapter, Chapter 8, discusses and summarizes the aforementioned findings, and, based on these findings, presents an open farm system model illustrating dynamic relationships between farmers, visitors, farm resources, and associated challenges and obstacles. Limitations and implications of this study, and recommendations for future research, are also discussed in this chapter.

CHAPTER 2: LITERATURE REVIEW

This chapter summarizes and synthesizes the insights, results, suggestions and gaps identified and generated from relevant past studies under the themes of farm tourism, agri-tourism, agriculture and tourism, and rural tourism. To review this literature in a logical and organized manner, the chapter is organized into several sections: (1) the interface between agriculture and tourism, (2) the interface between farmers and visitors, and (3) external influences on farm tourism.

1. The Interface between Agriculture and Tourism

Farm tourism has been identified in many studies as one type of agricultural diversification into tourist-related businesses (e.g., Ilbery, Bowler, Clark, Crockett & Shaw, 1998; Walley, Custance & Smith, 2011). This diversification was primarily triggered by the decline of the agriculture industry (Johnston & Mellor, 1961) and the benefits that farmers generated from tourism (Busby & Rendle, 2000). When tourists start exploring rural and agriculturally-based areas, and farmers start responding to these new demands, a new interface between agriculture and tourism begins forming (Nilsson, 2002). However, due to the complexity of the phenomenon, which comprises a range of activities, and the fragmented nature of small, rural enterprises that are major players in this phenomenon, it lacks a comprehensive body of knowledge and a theoretical framework (Busby & Rendle, 2000).

As tourism further penetrated into rural and agriculturally-based areas, the interface between agriculture and tourism has created three major terms in the field of agricultural

tourism: rural tourism, agri-tourism and farm tourism. To understand the interface between agriculture and tourism and to position the current study in the body of existing knowledge, it is essential to examine these different definitions.

On the other hand, as tourists become increasingly familiar with rural and agriculturally based areas and farmers become increasingly professional in terms of services rendered, the interface between agriculture and tourism transforms from individual efforts and recognition to collective and institutionalized efforts and recognition. This transformation illustrates the dynamic of agricultural tourism development (Busby & Rendle, 2000). The following sections focus on the interface between agriculture and tourism in terms of these definitions and dynamics.

The Triplet of Rural Tourism, Agri-tourism and Farm Tourism

One general theme identified from most literature related to farm tourism and agri-tourism was researchers' attempt to distinguish and define rural tourism, agri-tourism and farm tourism. Phillip, Hunter and Blackstock's (2010) observed that, these three terms were used interchangeably in many studies, causing confusion and unclarity; whereas Nilsson (2002) clearly distinguished farm tourism and rural tourism and argued that farm tourism was a subset of rural tourism, and Choo (2012) argued that agri-tourism was a subset of rural tourism. To understand the causes of this ambiguity, it is essential to examine the different definitions used in past studies.

Farm tourism was first recognized in Europe as an activity that had been in existence for over a hundred years (Busby & Rendle, 2000). However, it did not become a topic of research until two decades ago, and studies tended to focus on B&B operations on farms (Busby & Rendle, 2000; Cox & Fox, 2003). Due to this narrow focus of most farm tourism studies and the lack of a universally accepted definition of farm tourism, the term is sometimes considered synonymous with agri-tourism and rural tourism (Deegan & Dineen, 1997). However, the increase of the body of research related to these topics is contributing to new knowledge, but also creating "a complex and confusing picture, especially when authors do not clarify why they have used one particular term rather than another" (Phillip et. al., 2010). The confusing use of these terms has unfortunately caused many contradictory findings in the literature.

For example, in Ollenburg and Buckley's (2007) study on the motivations of farm tourism operators in Australia, farm tourism was identified as "commercial tourism enterprises on working farms." This definition excluded "bed and breakfast establishments, nature-based tourism, and staged entertainment"; whereas, in Hegarty and Przezborska's (2005) comparative study of agri-tourism in Ireland and Poland, they found that 48.4 precent of agri-tourism operators in Ireland and 100 percent of agri-tourism operators in Poland provided accommodation services. Another example is that in Propst and Combrink's (1991) study of the interrelations of agriculture and tourism in Michigan, a popular cherry festival was considered an important part of agriculture/tourism in Michigan, whereas in Flanigan, Blackstock & Hunter's (2014) study in Scotland, their interviews with agri-tourism providers and visitors showed that "a

working farm" was one of the discriminating features of agri-tourism products, thereby excluding off-farm activities.

The above examples illustrate the issues resulting from unclear definitions. Examining the details of these four studies, the contradictions emerged from several embedded facts: (1) the focus of the study, (2) the actual structure and layout of the agribusinesses, and (3) the perspective of the terms. In the first study (Ollenburg & Buckley, 2007), the authors' focus was on working farms and farm-based tourism products, hence a B&B in a rural setting without a working farm was excluded. However, in the second study (Hegarty & Przezborska, 2005), the focus was very broad and general, primarily focusing on the rural and agriculturally-based aspects, so enterprises in the rural and agriculturally-based settings were included in the "general term" of agri-tourism. This was also the case in the third study (Propst & Combrink, 1991). However, in the fourth study (Flanigan et al.'s, 2014), which focused on individuals' perception of agri-tourism, the "working farm" context of the inquiry required a synonym for farm tourism as defined in the first study.

This shifting of perspectives also addresses the third fact articulated above, that the perspective of the terms also affects how they are defined. A testament to this argument is Busby and Rendle's (2000) remarks that "agriculturalists view tourism as a category of farm diversification whereas tourism researchers consider it to be a sector of rural tourism in its own right". Therefore, to gain a full understanding of the nature of either farm tourism or agri-tourism, it is essential to examine the different stakeholders' perspectives (Arroyo et. al., (2013).

The insights into the second fact are that the definitions may vary from regions and nations due to different geographic, economic, sociocultural and environmental factors, and the nature of the inquiries conducted. These studies were conducted in Australia, Poland, Ireland, Michigan and Scotland, each of which have different rural and agricultural systems and structures. For example, when farm tourism was first recognized in Europe, most travelers had to stay in farm houses due to the lack of formal accommodations. The B&B tradition has endured. Therefore, most of the farm tourism or agri-tourism studies conducted in Europe focus on B&B operations (Busby & Rendle, 2000). In contrast, due to restrictive zoning policies, Hawaii does not have any legal B&Bs on farms, but farms do provide other tourism activities (Cox & Fox, 1993). Therefore, the definition of farm tourism in Hawaii will necessarily differ from that employed in Europe.

The above analysis of the literature implies that interpretations of the interface of agriculture and tourism, whether it is identified as farm tourism, agri-tourism or rural tourism, is closely related to the research focus, the geographic settings and the perspectives of researchers and research subjects. In addition, these three factors in turn influenced by the local context, as Nilsson (2002) argued that farm tourism consisted of small scale enterprises with local roots based on local traditions.

With respect to the current study, the island environment of Oahu creates substantial overlaps between rurality, agriculturally based areas and farms. Other than the downtown area of Honolulu and designed tourism resort areas, it is difficult to distinguish between rural tourism, agri-tourism, and farm tourism. For purposes of this study, farm tourism, as Nilsson argued,

constituting mostly small-scale enterprises with local roots, serves as a good starting point to understand the interface between agriculture and tourism in Oahu and Hawaii. Following this thread of thought, the next section further discusses the dynamics of farm tourism.

The Dynamic of Farm Tourism

Some literature identified farm tourism as a dynamic evolving process generated by actual farm tourism practices. Busby and Rendle's (2000) study of the transition from tourism on farms and farm tourism concluded that instead of being a straightforward transition from tourism on farms to farm tourism, the evolution was best described as "a continuum" in which each farm exists at a particular point on the continuum due to various factors, such as the level of marketing, competition, entrepreneurship and investment. A dynamic distribution along this continuum was observed both on a individual farm level and at an aggregate regional level, in which farmers' fragmented farm-tourism practices were collaborated and institutionalized through governmental and/or organizational regulations, fundings, marketing, etc., further professionalizing individuals' farm tourism practices (Busby & Rendle, 2000).

As such, even within the same region, when most of the farm tourism practices are clustered around one end of the continuum, where farmers' practices are mostly self-initiated, scattered and subordinate to the farming practices, the definition, or more precisely, the perception of farm tourism at this stage can be different from that of the stage when most of the practices are clustered around the other end of the continuum, where "tourism revenue exceeds that for agriculture, or once a farmer has adopted a tourism business plan, or when the enterprise

is regarded as farm tourism by the consumer" (Busby & Rendle, 2000, p. 640). Therefore, to view farm tourism as static or unidimensional risks over-simplifying the dynamic and multi-dimensional nature of farm tourism, and fails to recognize the existence of a holistic farm tourism system comprised of different stakeholders, including customers, farmers, tour operators, destination marketing organizations, legislatures and policy-makers and their perceptions and conceptions of farm-tourism, all interrelating with and affecting each other, and collectively influencing the development of the entire system. To further understand the dynamic of farm tourism, the following sections examine the interface between farmers and visitors and the external forces of farm tourism.

2. The Interface between Farmers and Visitors

The interface between farmers and visitors is inevitably formed in the context of farm tourism. Nilsson (2002) described the relationship between hosts and guests as an interaction between the host's private life and the guest's experiences. However, most literature focuses on the farmers' perspective (e.g., Mace, 2005; McGehee, 2004; Nickerson, Black & McCool, 2001; Weaver, & Fennell, 1997), few focus on the guests' perspective (e.g., Blaine, Mohammad & Var, 1993; Carpio, Wohlgenant & Boonsaeng, 2008; Norby & Retallick, 2012), and even fewer focus on both perspectives (e.g., Ingram, 2002; McGehee, 2007; Flanigan et al.'s, 2014).

Studies of the farmers' perspective have principally focused on farmers' motivations for diversification into tourism (e.g., Mace, 2005; McGehee, 2004) and farmers' identities shifting due to the incorporation of farm tourism (e.g., Burton & Wilson, 2006; Brandth & Haugen,

2011). The first research steam found that farmers' motivations were combined with economic, sociocultural, environmental and personal reasons. The second research stream found that as a result of farm tourism that new meanings were assigned to farmer identity and a new master identity or multiple identities could be adopted by farmers related to various social memberships and settings (Brandth & Haugen, 2011). In addtion, Burton and Wilson (2006) found that farmers' identity was not only influenced by the interactions with other social groups, but also constrained by the social and farm "structure", such as agricultural policy, politics, farm resources and the economics of farming, thereby influencing farmers' thoughts and actions.

Studies of farm visitors have focused on visitors' motivations, barriers to visitation and visitors' perceptions of agri-tourism. Ingram (2002) study identified several motivations through in-depth interviews with on-farm visitors, such as seeking a peaceful and uplifting countryside experience, escape from a busy lifestyle, a good learning experience for children, a family gathering, nostalgia for past farm and countryside life experiences, the hospitality of the farmers, lasting friendships built with farmers, and like-minded farmers with shared values. From this study it was obvious that social contact between farmers and visitors, and the countryside lifestyle were important drivers of visitation. The attractiveness of countryside lifestyle was also pointed by Nilsson (2002): "in order to achieve the interaction between host and guest, it is obvious that it must be the lifestyle of the enterprise which is sold, the man behind the farm, and not particularly the activities". Moreover, Choo and Petrick (2014) found that the satisfaction of social interactions during farm experiences was positively related to visitors' revisitation. Other than the social interactions, farming tradition and agricultural landscapes were important to

visitors (Leco, Hernández & Campón, 2012). Similar to Ingram's (2002) finding, Norby and Retallick (2012) found that spending time with family and friends was ranked the highest motivation among farm visitors. On-site restrooms, convenient locations and the availability of fresh products also ranked highly. On the other hand, Interestingly, the availability of group tours were ranked the lowest (Norby & Retallick, 2012).

The most significant barrier to visitation was "the lack of knowledge of the environment and the existence of such tourism products, as well as lack of information and promotion" (Leco, et. al., 2012). The lack of information and promotion was also identified as one of the obstacles in McGehee's (2007) study. Together with the lack of information, McGehee (2007) stated that "to what extent agri-tourists are interested in educational opportunities, activities that allow for family participation" were still unknown. The lack of research focused on tourists and their motivations were also identified as hindering "the efforts of those who wish to promote investment in infrastructure associated with rural tourism" (Blaine, et. al., 1993).

With respect to visitors' perceptions of agri-tourism, the concept of "authenticity" was emphasized by visitors interviewed by Flanigan and others (2014). Two types of authenticity were identified: object authenticity (the genuineness of artifacts or events) and experiential authenticity (visitors' interpretation of what they are seeing or experiencing). Although Flanigan and others (2014) suggested that further research on deconstructing ideas relating to object and experiential authenticity in agri-tourism was needed, visitors in their study indicated "the need for agri-tourism to be based on a working farm", that agri-tourism needed "to maintain an appropriate image and the integrity of the agricultural industry". Their study also indicated some

differentiation between providers' and visitors' perspectives of agri-tourism. Such differentiation was also elaborated by Arroyo and other (2013) who asserted that "there [was] not a shared understanding of agri-tourism which is problematic as this creates confusion and lessens its appeal among consumers, further hindering communication and collaboration among stakeholders".

From the above literature, it is clear that to fully understand farm tourism, it is important to account for farmers' and visitors' perspectives and examine their relationships in the context of farm tourism. Beyond farmers and visitors, some literature also investigated external influences on farm tourism, which will be discussed in the following section.

3. External Influences on Farm Tourism

In Fleischer and Tchetchik's (2005) investigation of rural accommodations in Israel, the authors found that "a concentration of firms and attractions creates positive externalities that benefit the single firm". As aforementioned, agricultural policy, politics and the economics of farming influenced farmers' self identity and their decision-making about farm tourism (Burton & Wilson, 2006). The influence that government policy has on tourism development in agricultural area was also emphasized in Liu, G., Liu, Z., Hu, Wu and Dai's (2008) study comparing two agricultural areas, in which one had strict policy on tourism development and the other did not. The results showed that even though the latter area was far from tourist attractions, tourism development had been undertaken by farmers, whereas the former area, which was proximate to tourist attractions, did not receive much tourism impacts. Ilbery and others (1998)

identified national and regional external context as consisting of the behavior of institutions, macro trends in the economy and society and technical, social, financial and institutional constraints at the local level. The regional context and local constraints were found to be affecting farmers' diversification.

From this review of relevant literature, it can be concluded that to fully understand the farm tourism phenomenon, researchers need to clearly identify the local context and focus of their research. A clear delineation of the research focus as rural tourism, agri-tourism or farm tourism is important to surmount the common ambiguity between these terms. Attention also needs to be paid to the dynamic of farm tourism as a continuum that includes different stakeholders. In addition, while the host/guest relation has been found to be the core of farm tourism, few studies have examined this relation in the context of farm tourism. Finally, farm tourism, positioned as the interface between agriculture and tourism and the interface between farmers and visitors is also influenced by many external factors, which need to be further investigated to fully understand the nature of farm tourism.

CHAPTER 3: METHODS

This chapter describes the research methods employed in this study to achieve the objectives listed in the first chapter. The reliability and validity of data will also be discussed in this chapter.

Influenced by the interpretive paradigm and in response to the suggestions made in previous studies, qualitative field research methods were used. Given the exploratory nature of the study, this was considered the most appropriate approach for this study.To achieve an in-depth understanding of farm tourism, participant observation on selected farms and semi-structured interviews with farmers and on-farm visitors were adopted to collect the primary data. Systematic coding was conducted to help the author organize and categorize the data. Cross-checking with field notes and memo-writing were employed simultaneously to help the author track and analyze the author's thoughts, ideas and reflections, and thereby help analyze the coded content. Descriptions of the settings, interviewees and the author's observations were also recorded to document the phenomena under investigation as fully as possible.

1. Research Design Approaches

Field research is defined as a "systematic study of ordinary activities in the settings in which they occur", with its "primary goal [of] understand[ing] these activities and what they mean to those who engage in them". Data are collected by "interacting with, listening to and observing people during the course of their daily lives" (Bailey, 2006, p1). This method

emphasizes understanding the social reality that is dependent on and given by those in the setting by representing the experiences of others (Bailey, 2006).

Farm tourism in Hawaii forms such a social reality that is directly formed, practiced and experienced by the farmers who welcome visitors to their farms and the visitors who engage in this activity.

Participant observation and semi-structured interviews were employed. For each selected farm, permission to observe farmers and visitors on the farm was first secured from the owners or a key person; after such permission was obtained, the author interacted with and listened to farmers and visitors, and observed their activities and behaviors, through participating in certain types of farm work like weeding, cleaning fields, harvesting, etc., and certain farm tours; after the field observation, reflective field notes, comments and memos on what had happened on the farm during the observation were recorded by the author. These field notes were used to generate questions that had not been answered or could not be readily answered through the observation and required exploration in follow-up semi-structured interviews. In addition, the field notes served to reconfirm interviewees' answers with the author's previous observation during data analysis. This cross-checking between field notes and interviews added a layer of internal validity to the study.

After the participant observations were completed and interview questions were constructed based on field notes, a list of questions for farmers and visitors was sent to the owners or the key person for recommendations and to avoid any potential awkwardness to the

visitors and farmers. The interviews with farmers and visitors were voluntary, and audio recording were made with interviewees' consent. The semi-structured interview approach was adopted because this allowed the author to have some overarching questions forming the main structure to maintain the consistency across different interviews, while also permitting a certain degree of freedom for either the interviewer or the interviewees to prompt new thoughts and ideas, as well as to give interviewees a feeling of dialogue rather than a rigid interaction.

2. Data Collection

Data were collected from February to October 2016. Four small-scale farms were observed and 20 semi-structured interviews with 24 interviewees were conducted during this period. Among the interviewees, eight were farmers or owners from the four selected farms and 16 were visitors. The average interview time was about 25-35 minutes, and 602 minutes of interview audio recordings were captured for transcription and analysis. In addition, approximately 73 pages of field notes were taken, and the interviews were transcribed into 164 pages of transcripts. This section outlines the data collection procedures, including selection of farms and interviewees and descriptions of them.

Selected Farms

One of the major challenges faced by this study when it came to finding prospective farms was the lack of a clear definition of farm tourism, and the absence of a list of farms that welcomed visitors. In order to embrace as many farms as possible, the technical definition used to look for farms was simply ones containing fewer than 10 acres, open to the public, and

providing activities for recreational and educational purposes. Farms falling under this definition constituted the population of farms for this study.

Since no comprehensive and current directory of farms that provided farm tourism services existed, snowball sampling was used to help find potential research subjects. Due to the small geographical scale of the island of Oahu, and since farmers on the island were a relatively small social group, this proved to be an efficient strategy. Three small-scale farms that provided at least one or two activities for recreational and educational purposes, and one contrasting small-scale farm that had such activities previously but stopped providing them, were chosen as the subjects of this study. Detailed descriptions of these selected farms are presented in Table 3.

Table 3. Detailed Descriptions of Farms

Participant observations and Interviews on the farms						
Farm name	**Location**	**Acres**	**Participant observation**	**Famers interviewed**	**Visitors interviewed**	**Tourism activities**
Blue Sky Farm	Near North Shore	5	Feb.-Apr. 2016, 7 times	3	8	A farm-to-table cafe; two types of farm tours; vegetable stall; field trips for school kids; volunteer day
Green Valley Farm	West side	9	Jun. 2016, 4 times	2	4	A farm-to-table cafe; a farm tour; on-farm store; volunteer day
Fresh Water Farm	Near Haleiwa	6	Jun.-Aug. 2016 5 times	1	1	Japanese group tour brought by a tour company; individual tours; field trips for school kids; customized events; catering and customized on-farm dining; volunteer day
Purple Flower Farm *	Near Haleiwa	6	Oct. 2016, 1 time	1	0	vegetable stall; periodic on-farm dining

*Note: * Purple Flower Farm serves as a contrast subject that previously provided farm tours but ceased the service after three months of operation.*

To protect the confidentiality and privacy of the subjects, pseudonym names have been assigned to the farms and the persons observed or interviewed in this study. In addition, any information that would expose the identities of such individuals has been deliberately omitted.

Selected Interviewees

Similar to the issue faced with regard to the selection of prospective farms, to differentiate tourists from local residents among all the farm visitors and the necessity of this differentiation also proved to be a major challenge. This challenge was rooted in the concept of tourists and its "default" relation to the tourism industry. When the word "tourist" is used, a typical type of tourist who comes from far away and is considered a "foreigner" to the local area appears in one's mind by default. However, according to Netto (2009), the role of tourist is relevant and relative to the host (p. 56). In other words, in the context of farm tourism, farmers serve as hosts, even though they are not traditionally considered "tourist hosts" and their guests, whether they come from the surrounding area or more distant origins, are considered "tourists". On the other hand, from the farmers' perspective, it is largely inconsequential whether their visitors are tourists or local residents. The products and services provided to the visitors are the same. Thereby, to fully capture insights from the demand side, both tourists and local residents were included in the study. To prevent confusion, hereinafter the people who visit the farms will be termed "farm visitors" or simply "visitors".

Despite the inconsequentiality of differentiating between tourists and local residents for farmers on an operational level, it is insightful and necessary to distinguish them and to identify

the different relations these two groups have with farms and farmers in the farm tourism context. One evident rationale behind this differentiation is that tourists' expenditures infuse money into the destination's economy from outside the destination with attendant economic benefits, while local residents merely relocate the money within the destination. In this regard, the question, "Do you live on the island" was asked to determine whether interviewees were tourists or local residents. And questions like "What percentage of your customers are local" and "Do you think the farm should focus more on local customers or tourists" were asked of farmers to identify their' perceptions towards different types of visitors.

As for the selection of visitor interviewees, no specific rule was followed. Visitors were approached by the author and asked for their willingness to participate in the study. As for the selection of farmer interviewees, the farm managers and owners were interviewed. Detailed descriptions of these selected interviewees are presented in Table 4.

The semi-structured interview questions are appended. As previously mentioned, the interview questions served as a complementary tool to the participant observation, in which questions that were not answered or needed further interpretation were incorporated into the interview. Thereby, the interview questions, especially the questions for farmers, slightly varied from farmer to farmer. Nevertheless, the questions focused on the themes of how and why farmers started farm tourism, the perceived self-identities, their management approaches, attractions for visitors, the local visitor to tourist ratio, challenges, future plans and interpretation of "agri-tourism". The interview guide with farmer Annie from Blue Sky Farm is presented in Appendix A.

Table 4. Detailed Descriptions of Visitor and Farmer Interviewees

Farm	Farmer/ Visitor	Name	Age	From	First timer to the farm	First timer to Hawaii
Blue Sky Farm	Visitors	Angela	40-50	Downtown	Yes	N/A
		Kate	30-40	Kalihi	Yes	N/A
		Clark	30-40	Pearl Harbor	Sixth visit	N/A
		Cathie	35-45	Kailua	Fourth visit	N/A
		Daisy & Emma	70-80	Waialua & Sunset Beach	Ten+ visit	N/A
		Hailey & Allen	30-40	Missouri	Yes	No
		Freya	30-40	California	Yes	No
		Bob & Jenny	30-40	Colorada	Yes	Yes/No
	Farmers	Annie	30-40	N/A	N/A	N/A
		Aaron	30-40	N/A	N/A	N/A
		Eric	35-45	N/A	N/A	N/A
Green Valley Farm	Visitors	Bonnie	60-70	Waianae	Ten+ visit	N/A
		Daniel with friends	70-80	Japan	Fifth visit	No
		Lucy with friends	40-50	Japan	Yes	N/A
		Maggie with family	40-50	California	Second visit	No
	Farmers	Benjamin	25-35	N/A	N/A	N/A
		Chuck	25-35	N/A	N/A	N/A
Fresh Water Farm	Visitors	Nancy with family	40-50	Downtown	Second visit	N/A
	Farmers	Bella & David	45 &55	N/A	N/A	N/A
Purple Flower Farm	Farmers	Frank	55-65	N/A	N/A	N/A

3. Data Analysis

Qualitative analysis is a multi-pronged process that requires researchers to break down the data, study their components, investigate their importance and interpret their meanings (Bailey, 2006). Due to the interpretive nature of field research, few standardized and easily understood instructions exist on how to obtain analytical insights into the data (Bailey, 2006).

In this thesis, three strategies were adopted to analyze the interview transcripts and field notes. The first strategy was systematic coding, which includes open coding and axial coding. Open coding is a process of "breaking up multiple pages of text into more manageable segments that can be grouped together and used during later stages of the analysis", while axial coding is a process of "further reducing the data by identifying and combining the open coded data into larger categories that subsume multiple codes" (Bailey, 2006). These two processes were used to disaggregate and label the text data that were transcribed from interview dialogs, and to transform them into more conceptualized frameworks and sets of ideas. Different from most quantitative data analysis, open coding was conducted after the first interview was transcribed, and was continued as the participant observations and interviews occurred. The transcripts were read line by line, and labels, ideas, insights, pattens or themes that might be potentially useful for the analysis were coded on the content. As more data were coded during this process, some codes were revisited, recoded or coded with multiple codes. Axial coding was conducted after all the data were transcribed and subjected to open coding. In the process, all the raw data and open coded data were re-examined and reduced by combining and conceptualizing them into larger categories that subsumed multiple codes (Bailey, 2006). For example, contents that were coded as "hanging out with family" and "willingness to share with friends and family" in the open coding were combined into a category labeled as "a new family-friendly leisure activity". This process also included searching for instances, such as education related content. Moreover, as clearer concepts appeared through the focused coding, they were related and connected to previous research and theoretical concepts. These connections to previous studies also helped to direct the current threads of thought in the study (Bailey, 2006).

The second strategy was cross-checking with field notes and memo-taking. Field notes were taken after each participant observation at the farms. Similar to a diary, every detail the author encountered at the farm was written down. These details included the environment of the farm; conversations with farmers and visitors; interactions between farmers, between visitors, and between farmers and visitors; activities of farmers and visitors; the number of visitors; and the author's feelings, questions, comments and reflections. These field notes were used as a reference to cross-check with the interview data as to whether the data were consistent or inconsistent with the observations. The cross-checking and coding were also accompanied by memo-writing. This was used as a mind-tool to create, define, and redefine conceptual categories, link concepts, and draw charts, mind-maps and sketches of features important for understanding the setting (Bailey, 2006). It was a process in which the author talked with herself in a written format by asking questions, posing hypotheses, and seeking answers grounded in the data (Bailey, 2006).

The third strategy was description, an extremely important aspect of field research (Bailey, 2006). It involves describing the setting, interactions, and observations that have occurred over the prolonged field study period in as detailed a manner as possible (Bailey, 2006). To present the findings and results interpretively and make them easily understood, detailed descriptions were used in this study to help readers "see" the setting, the farmers and the visitors.

Thus, systematic coding, field-note taking and memo writing and descriptions were employed for data analysis. As mentioned earlier, qualitative data analysis is not as concrete,

standardized and explicit as quantitative data analysis. However, for this study, combined use of several qualitative methods helped increase the validity and reliability of the findings.

During the analysis, several challenges were encountered. The major one was how to make sense of and summarize the hundreds of pages of transcripts and generate insights into them, since everything looked insightful and meaningful. Systematic coding and memo-writing were helpful tools to organize the data, ideas and thoughts. Another challenge was the potential unintentional bias carried by the author due to her background and ethnicity. Being born and raised in the countryside of China, farming and farm land was part of the author's daily environment. It was difficult for her to understand the disconnection that most Americans had to the farm land and the freshly-picked food. Talking with friends who were born and raised in the States about their experiences with farming and farm land helped her to understand this disconnection. Nevertheless, the connection that the author had with farming activities made her readily accepted by the farmers and regarded as a member of the farming "community".

4. Reliability and Validity via Triangulation and Reflexivity

Debates over the concepts of quantitative vs. qualitative research have been going on in academia for decades. Although most researchers believe that both methods are useful and legitimate (Walle, 1997), the approaches used in tourism research are mostly quantitative (Phillimore & Goodson, 2004). This has resulted in part from the prevailing positivist paradigm and the business forecasting-oriented nature of most tourism research (Decrop, 1999; Phillimore

& Goodson, 2004), and in part from a failure to justify the soundness of qualitative research (Decrop, 1999).

Arguably, whether to choose qualitative or quantitative methods "must be determined by the situation in which research takes place, not by some misguided search for rigor simply for its own sake" (Walle, 1997, p.535). As previously stated, qualitative methods were the most reasonable and suitable methods for this study. Therefore, the questions remaining regarding the qualitative methods used in this study are to what extent the approaches are legitimate and the results sound.

To respond to these concerns, two follow-up and closely related questions need to be answered, 1) the criteria for qualitative inquiry, and 2) how to meet these criteria (Decrop, 1999). As listed in Decrop's (1999) discourse on qualitative tourism research, four criteria were identified paralleling quantitative terminologies, namely credibility, transferability, dependability and confirmability. Triangulation was proposed as a systematic approach to address these criteria. Additionally, reflexivity was also emphasized and practiced in this study, as it is a competency required for field researchers (Bailey, 2006).

Triangulation

In Decrop's (1999) discourse, four basic types of triangulation were suggested for tourism research, namely data, method, investigator and theoretical triangulation. Data triangulation was achieved in this study by (1) using primary data collected by qualitative field research and secondary data obtained from the U.S. agricultural census and the Hawaii State

database, and (2) taking field notes and crosschecking with interview data. Method triangulation is illustrated by the combination of participant observations and semi-structured interviews and the various backgrounds of interviewees, demonstrating different perspectives on farm tourism. Theoretical triangulation was achieved by examining and connecting to literature and theoretical concepts from various fields.

Triangulation involves searching for convergence as much and as thoroughly as possible (Decrop, 1999). For this study, the data, investigator and theoretical triangulation helped reach the convergence between the internal and external sources, and hence improved transferability and dependability; the data and method triangulation helped reach the convergence within the internal sources and between different members, and hence improved credibility and confirmability.

Reflexivity

The importance of of reflexivity has been recognized since the 1960s (Bailey, 2006). Ontologically speaking, reflexivity is formulated as "a sociological third way" by social scientists, resulting from their striving for the synthesis and transcendence of established orthodoxies and their understanding of "human sciences as the mediator between the mental schematizations of the social world and social reality" (Tsekeris & Katrivesis, 2008, p. 2). In other words, the social world described and theorized by scientists is no longer the real social world, and is unconsciously or consciously modified and biased by the scientists' own status characteristics, values, history, etc. (Bailey, 2006). Indeed, having the reflexivity concept in mind

"forces" scientists to consciously recognize their own influence on the phenomena and adjust themselves "to the specific contexts of the social phenomena" (Tsekeris & Katrivesis, 2008, p. 3).

Having a reflexive mind helped the author to be aware of her own influence on the subjects and their practices of farm tourism during the participant observations, and the influence of current farm tourism theories and concepts on the author's observed patterns and the formulation of interview questions. Field note-taking and memo-writing also helped the author reflect on her activities and interactions with the subjects in the field, and to refresh and distance her mind from previous observations and existing theories, in order to enhance the objectivity of observation during the next field trip. Constantly reflecting on the research progress and design also gave the author better ideas about what had been observed, what had been omitted and the extent to which the inquiry may have diverged from the overarching research framework.

CHAPTER 4: THE REJUVENATION OF FARMERS THROUGH FARM TOURISM

This chapter presents results on the nature of farmers who were involved in farm tourism, and their points of views towards visitors and their farm identified by this study, in fulfillment of the first objective listed in Chapter 1. To present the analysis and research findings in a logical flow, this chapter is divided into three sections. The first section provides evidences that the image of "farmers" has been rejuvenated through farm tourism and that farm tourism provides farmers with a new outlet to be involved in the agribusiness. The second section focuses on farmers' self identity. Evidence of how farm tourism was altering their identities and how farmers' adopted identities were affecting their decision-making towards farm operations is presented. The third section describes farmers' motivations for becoming involved in farm tourism.

1. The Rejuvenation of "Farmers"

> …you know in the midway… somewhere during college, I decided that I wanted to come back and work for the farm, our family business. But.... at that point my parents said, "no, you know we sent you to the college, you have to go and do your own thing", because they didn't want me to come back and be… the... commodity type of farmer that we currently work. Farming is very very risky and they wanted me to do something that was a little more secure, not as risky, and they thought it was crazy, they said no no no no no. (Annie, farmer from Blue Sky Farm)

When asked what made her decide to establish a farm tourism business on the current family farm, Annie, a woman in her mid-30s, recalled this scenario to begin her stories of the farm tourism venture. Throughout the study, answers similar to Annie's were observed from different farmers at different farms. Younger generation farmers who had grown up on farms or been immersed in a farming environment, even though they may not have been trained or taught

to be a farmer, were entering the agriculture industry, either back to their family farm business, as farm managers, or even owning their own farms.

Studies have shown that farms that adopt farm tourism tend to have more endurance due to the family-agriculture attachment, and are more likely to be passed down to the next generation (Barbieri, 2013). In Annie's case, farm tourism provides her with a new business model to operate the farm, and dissolves the conflict between her desire to be a farmer and her parents' opposition to her being a conventional farmer.

However, in Hawaii, farming as an occupation has not been perceived as a decent job until recently. As Aaron, another farmer from Blue Sky Farm, mentioned to the author during the participant observation, farmers in Hawaii were perceived to be equivalent to slaves from the Plantation Era, when massive numbers of immigrants were recruited as farmers and forced to work like slaves. Before the 1950s, when tourism became the primary economic engine in Hawaii, most of the population in Hawaii worked as farmers on various plantations (Philipp, 1953).

The negative image of farmers was forgotten by most people, concurrently with the recession of the agriculture industry in Hawaii, until the trends of healthy eating, like "farm-to-table" and "chef-on-farm", returned farms and farmers to public consciousness. As Annie recalled,

> I think growing up… farming was not a very...very noticeable... I don't know what the word is, but it wasn't a very interesting profession… but later in life, the chef started getting more involved, wanting to feature XXX's [farm's name] corn, or XXX's [farm's name] greens, you know, farming started being recognized a little bit more, because I

> think, of the restaurant and the chefs' promoting it, and I think through these, people have kind of recognized again, the importance of it. (Annie, farmer from Blue Sky Farm)

The non-conventional role of being a farmer and the new ideas about farming have rekindled the younger generation's interest in being farmers, and the image of farmers has also been reconsidered and rejuvenated through these connections and interactions between agriculture and other other industries, including tourism.

2. Farmers' New Identities

Burton and Wilson's (2006) inquiry into the transition of farmers' self-identity against the macro structural changes in agriculture from productivism to post-productivism to multifunctionality using social psychology theory suggested that the transition was not compelled by macro structural changes, but a result of farmers' interactions with different social groups, and demonstrated "externally as a dynamic interactive dialectic between the individual and society and, internally, as a mobile and situationally dependent structure of voices in discussion" (p. 100). These findings indicate that as farmers become increasingly exposed to different social contexts and interactions with different social groups, their self-identities are destabilized. Their study also showed that farmers' self was constructed of hierarchical multiple identities, and the most salient identity influenced farmers' actual practices (Burton & Wilson, 2006). Similar results were also observed in the current study.

By opening their farms to the public through farm tourism, it was observed that farmers became exposed to new social environments and social groups, and the inevitable interactions with these new social elements altered their self-identities.

> I guess a little bit...yeah, a farmer entrepreneur, I guess. Cuz I am not just farming, we are doing a lot of other things, festivals, we do events, we are doing tours, we are doing… like all kinds of things. (Benjamin, farmer from Green Valley Farm)

Benjamin is a young man in his late twenties, who grew up with his parents on a nine acre farm operated by a non-profit organization. When he graduated from college, he was asked to be a farm manager for this farm. He accepted the request. And he also confirmed to the author during the interview that being a farmer was always part of his dream, but he didn't expect it to be realized so soon. The first identity he internalized was farmer. As the farm grew and interacted with the market and other social sectors, more and more non-traditional events and activities occurred on the farm, either initiated by Benjamin or proposed by other social groups. These new events and activities require farmers to have different managerial capabilities beyond farming skills. When asked if he thought of himself as an entrepreneur, he was not quite sure about this identity, but he noted that he was not just a farmer.

Benjamin's realization of new identities, as well as his hesitation in adopting new identities, were confirmed by his co-worker, Chuck. He said, "yeah, I can see people consider him [Benjamin] as an entrepreneur, I don't know if you asked him this question, but I doubt he said he's an entrepreneur, pretty sure he's gonna say he is a farmer" (Chuck, farmer from Green Valley Farm). It can be seen that Benjamin's salient self-identity was that of a farmer, which was also demonstrated by his major focus on field production and expansion. And when it came to farm tours, outreach and collaboration with other social groups to diversify the farm business, Benjamin was not as certain or as enthusiastic about these as he was about farming and producing.

This uncertainty about his other identities was partially caused by his position as a farm manager within the non-profit organization's internal structure, where it might not be easy for him to commence too many entrepreneurial initiatives, and partially caused by a previous unsuccessful collaboration with tour companies. This observation is similar to that of Burton and Wilson (2006):

> we argue that the structure of the farm has become incorporated within the farmer's self-concept… while a farmer may begin with the intention of farming as an 'agribusiness' farmer, failure to acquire sufficient land would leave her/him less able to interact with others who are able to express the same 'agribusiness' self-identity. Eventually, the lack of suitable social contacts and increased social contact with other identity groups in the everyday running of the farm would lead to an increased salience of alternative identities, and it can be hypothesized that the relative salience of the agribusiness identity would diminish. (p. 110)

In other words, the interactions with other social groups alters and destabilizes farmer's self-concept, and the structure of the farm (e.g., location may influence ability to diversify, or farm size to engage in agribusiness) constrains how the farmer could actually interact with others, but the farm structure is also formed and influenced by the farmer's salient identities.

A similar example was observed at Fresh Water Farm. Bella and David have been farming at Fresh Water Farm for over ten years. They have been wanting to expand the farm and open it to the public, but it wasn't as successful as they expected. When asked the reasons for this, they responded:

> … because we knew we know we want to grow, how come we cannot. You know, so we want someone who has done this, please tell us what we need to do, or...stop doing… so after we looked at everything, he goes like "so you guys know what your biggest problem is" and he was like "you, you are your biggest problem", and we were like, "mmmm, aha", you know, to see it on the paper like that, and "yeah, we are our biggest problem, that's why we cannot move forward". (Bella and David, farmers from Fresh Water Farm)

This statement connected to the question of self-identity. When asked if they thought of themselves as farmers, educators, culture disseminators or entrepreneurs, they answered, “all of them”. However, during the participant observation, the author observed that they didn't even know how much they should charge the visitors. Bella told the author that when individual visitors asked her how much they should pay for the farm tour, she would always say “no, that’s fine” or “no need”, for she didn’t want to sound like she was selling the culture and the Hawaiian traditions. The interaction with other social groups alters and destabilizes Bella’s and David’s identities. However, the uncertainty and unclarity of “who they are” in terms of farm operations was actually preventing the farm from growing and developing.

A contrasting example was observed at Blue Sky Farm, where everyone was assigned to his/her area to manage and monitor with a certain level of autonomy. As Annie described it,

> we believe in...building and putting..building and putting a lot of our attention on our staff and employees, so for example, we really try to work with them, to give them the tools they need, so that they can handle their responsibility, without us trying to get so involved. (Annie, farm from Blue Sky Farm)

At Blue Sky Farm, everyone has a certain level of interaction with other social groups, and the interaction was self-identified and internalized. As Aaron described it, “now I am the farm manager and the tour guide, and those are well split between the two, like educator and farmer, and that's kinda the way that I like to put my job, like it's almost 50/50.” (Aaron, farmer from Blue Sky Farm). Aaron is in charge of field management and education and weaving those elements into the farm structure; Annie handles a lot of advertising and marketing; Eric, Annie’s husband, monitors the operation and maintains the entire farm.

However, Blue Sky Farm was not without problems, one of which derived from the process of farmers and staff identifying themselves as the farm evolves and develops, and without a person who is identified or self-identifies as the general manager overseeing, controlling and monitoring this development process in term of steering the communication and interactions among farmers and staff in an integral direction. When asked if there were regular staff meetings to mutually communicate and interact, the interviewees answered, "not really". These results corroborate those of Burton and Wilson's (2006), who found that farmers' identities tend to be conceptualized as something static and homogeneous, derived largely from existing "agrarian ideology". However, as farms open to the public and farmers interact with other social groups through farm tourism or other forms of farm diversification, both farmer- and farm-identities are destabilized. How farmers internalize alternative identities is partially constrained by the farm structure and farm identity, but arguably and conversely, farm structure and farm identity is formed and influenced by the farmers' identities. In order to "incorporates farmers' multiple roles as food producers, environmental managers and as producers of 'consumption space' for non-agricultural activities (e.g. through diversification activities)…ultimately, will mean that society… will have to change its thousand-year-old notions of both what the term 'farmer' means and what 'farming' is about" (Burton & Wilson, 2006, p.111).

3. Farmers' Motivations for Farm Tourism

Farmers' motivations for diversifying into farm tourism have been the foci of many studies (e.g., Mace, 2005; McGehee & Kim, 2004; Nickerson et. al., 2001). Although these studies approached the same topic from different perspectives, they all concluded that such

motivations combined economic, social and personal reasons, as opposed to a single reason, and varied from farmer to farmer. A similar pattern was observed in this study, but with some nuances.

Economic Motivations

In general, the three biggest challenges facing farmers in Hawaii, especially smallholders, and threatening farms' survival, are: 1) competition with massive imported low-priced produce, 2) high labor costs, together with other costs like land costs, costs of pesticides and herbicides, and high living costs, and 3) the inherent natural diseases and fluctuations of the agriculture industry. Confronted with these challenges, the farmers' overarching goal and motivation is to sustain the farm and make it profitable. Thus, the economic motivation is a very obvious and inevitable driving force for farmers.

Efficient Utilization of Farm Resources

Another obvious motivation is to efficiently utilize farm resources. For example, the idea of opening a smoothie stand on the Blue Sky Farm came from a desire to utilize not-qualified fruits in terms of shapes and appearance, and to avoid wasting them simply because they were not qualified to be sold in grocery stores.

Educational Purposes

As farmers interacted with other social sectors, it became increasingly clear to them that one of the major problems underlining the insufficient local food system was the disconnection

between the public and local food production. The unawareness of the locally produced food and the difficulties of running a local agribusiness among the public made it difficult for farmers to sell their produce and compete with low-priced and massively produced imported food. For these local smallholders, without addressing this disconnection it is difficult to achieve the economic goals. Annie's interpretation of her motivation for education demonstrates this pattern.

> …you know get people excited about agriculture again, and to educate them about farming and agriculture so that we can sustain it, yeah, without it, we disconnected, it's very very difficult. (Annie, farmer from Blue Sky Farm)

The disconnection between people and the farm and their food was observed throughout the study. One visitor who visited Blue Sky Farm for the first time described her eye-opening experience on the farm as follows:

> Visitor: I mean I got to see fruits that I haven't seen in years, you know like... and then learnt about them, learnt about new fruits, that I... like 'what is that?' you know.
>
> Author: Such kind of... what kind of fruits?
>
> Visitor: I mean... the Star Apple. I was like 'what is that?' and then the cocoa. I've never seen it..alive. So that was pretty cool too. Kale...I didn't realize kale grew like.... Ti leaves, yeah! (Angela, visitor to Blue Sky Farm)

Some visitors mentioned to the author that if a child was asked where a banana came from, the child would answer Costco or a grocery store. Farmers noticed this social disconnection and turned it into a new motivation to educate people about agriculture. This motivation aligns with people's curiosity about farm operations and farm products as well.

Building Community Relationship

Other than the motivation for education, building a healthy local community relationship was also among farmers' social motivations. As Annie described one of the farm's goals,

> we are taking farming to a whole new level of agribusiness. We do it all for the purpose of sustaining agriculture. Our goal is to create a gathering place for the community and bring awareness to agriculture. (Annie, farmer from Blue Sky Farm).

When Frank from Purple Flower Farm described his farm, the community elements were the core of the entire farm.

> a non-profit makes it a part of it.. the community, a community effort, because it's based on a mission. you know non-profit, you are trying to serve something that is for the public good, for the greater good, and... so you have that mission and you bring people together through your board of directors. So as a non-profit, you have that, the community foundation. (Frank, farmer from Purple Flower Farm)

Disseminating Local Culture and the Farm's Own Culture

Another observed motivation was to either disseminate the local culture or the farm's own culture. Disseminating local Hawaiian culture was especially observed at Fresh Water Farm, a 6-acre taro farm. The farmers were practicing Hawaiian farming traditions while simultaneously perpetuating Hawaiian culture through these practices.

As for Blue Sky Farm, the culture they were trying to disseminate was based on the family's long farming history, combined with current healthy lifestyle trends, as described by Eric, Annie's husband:

> We give people the experience of an authentic family business and family farm that's focused…you know educating people about food, as well as standing up for something healthy, and a local healthy lifestyle…What makes us true and authentic, is our history and our commitment to agriculture. (Eric, farmer from Blue Sky Farm)

The observed motivations of farmers indicate that economic and social motivations are closely intertwined. Achieving the social motivations actually led to the fulfillment of economic motivations. However, how to integrate and balance these motivations is something farmers need to work on to achieve maximum benefits from their farming practices and daily operations.

In summary, due to the historical issues that Hawaii had during the Plantation Era, the image of farmers was negative and low-class. In addition, the risky and hard-labor nature of the farming business lessened the possibility of the new generation becoming farmers. However, farm tourism provided the new generation with a different way of operating farms and made "farmer" a new profession requiring more managerial skills than pure labor. As farmers became involved in farm tourism and interacted with other social groups, new identities such as educator, culture disseminator, service providers, marketer and product designer fused with the traditional identities of farmers as agribusiness persons. The success or failure of the adoption of these new identities was affected by the structure of farms and the feedback of interactions with other social groups, and eventually affected their decision-making toward farm operations. Associated with farmer's multi-identities, their motivations for farm-tourism were mixed with economic and socio-cultural reasons. The disconnection between consumers and farm land was a basic issue compelling local farmers to sell local produces. Therefore, educational motivations were strongly observed among farmers. This also provides insights into the multi-functionality of farmers and farms in the social structure, which will be discussed in detail in the following chapter.

CHAPTER 5: MULTI-FUNCTIONALITY OF FARMS

In this chapter, attention is turned to the supply side of farm tourism, especially the farm resources that were re-defined and re-utilized through farm tourism. These re-utilized resources were either re-designed and re-used by farmers to cater to visitors, or re-discovered and enjoyed by visitors. As aforementioned, through the lens of farm tourism and the examination of farmers' motivations, the functions of farms were revealed to be not only providers of food, but also providers of landscapes, bio-diversity, and traditions that were previously ignored or merely fixed in the food-producing function, and were assigned new meanings and values.

This phenomenon resonates among sustainable agriculturalists. Karami and Keshacerz (2009) argue that for agriculture to be sustainable agriculture, the human dimension and social dynamics need to be considered in addition to environmental factors. This view was also shared by the United Nation's recently released Trade and Environment Review 2013, which argued that farms not only produce food, but also public goods and services, such as water, soil, landscapes, energy, biodiversity, and recreation (United Nations Conference on Trade and Development, 2013). These resources can be utilized for recreational and educational purposes, resulting in economic, social and environmental benefits outcomes. To better address the multi-functionality of farms and to meet the second objective listed in Chapter 1, these resources were categorized as landscapes, farm-fresh food, biological resources, and traditions, and discussed in the following sections.

1. Landscapes

> well, the mountains are really special… this particular farm sets kind of like in the middle… it feels like a huge hug… I get to smell the plants themselves, and you know, the animals and rolling fruits, sometimes with the cafe, you know… it's the atmosphere. (Bonnie, visitor to Green Valley Farm)

Bonnie's self-disclosure of the feelings that made her repeatedly return to Green Valley Farm again and again well illustrated the value of the farm landscape and the surrounding natural ambiance. Similar to Bonnie, Cathie, who visited Blue Sky Farm for the fourth time with her two children, also stated that the natural atmosphere of the farm made her feel very relaxed, and with the big open lawn space next to the cafe, her children got a chance to be relieved from their long drive from Kailua to the North Shore, and to run and play. During the participant observation at Blue Sky Farm, the author also noticed that families and friends would bring their children to the farm and let them play on the lawn while the adults chatted on the outdoor seats of the cafe.

Other than serving leisure purposes for people to relax and play, the open space on the farm was also used for other activities and events. Farmers from Fresh Water Farm used the space for team-building activities, family gatherings, life-skill training and workshops; the open spaces on Green Valley Farm were used for farm festivals, wellness activities like Yoga and Pilates and outdoor musical events; and at Purple Flower Farm, the open space was used for occasional dining events.

2. Farm-Fresh Food

Food is the most basic product of farms. Generally, farmers grow vegetables and fruits and raise livestock, and sell them through farmers' markets or middlemen and wholesalers as raw

food materials. With farms being increasingly accessible to the public, many more nuances of farm food have been discovered and utilized.

Food Tasting

> Daisy: Seeing how it's grown and you would wanna taste it.
>
> Emma: Yeah, tasting is a good part of it. But you are curious when you travel, how do they… where do these things grow, what do they look like, and how do they grow and what do they taste like? (Daisy and Emma, visitors from Blue Sky Farm)

Tasting freshly picked farm food is attractive to visitors, especially after seeing fruits or vegetables growing in the fields. The above conversation between Daisy and Emma at Blue Sky Farm illustrates this point. The excitement of tasting freshly picked food was observed among visitors who took a tour of Blue Sky Farm during the participant observation. It was a wagon tour in which the visitors did not have very intimate contact with the plants, but when farmer Aaron picked some acai berries from the tree and made visitors taste the berries, everyone on the wagon suddenly got excited and started talking about the tastes and interacting with other visitors. Food tasting gives visitors a direct sense of place and authenticity, boosting their experience and satisfaction.

Similar excitement was observed at Fresh Water Farm with a Japanese tour group. Towards the end of a short tour of the farm, everyone got a chance to taste lilikoi ice-cream, apple banana and herbal mamaki tea, which was hand plucked from the tips of the mamaki tree grown on the farm. The tasting experience was a main theme of the whole tour.

Value Added

Value added products from farms are becoming increasingly common. At Blue Sky Farm, an extensive series of products were made on the farm, from banana bread, smoothies, chocolates and acai bowls to jams, honey, lotions and t-shirts. At Green Valley Farm, the farmers dehydrated herbs and fruits, while at Fresh Water Farm, their main value added product was Poi, the mashed taro which has been the staple food for native Hawaiians for hundreds of years.

Another type of value added product identified was not produced by the observed farms but farmers bought them from other farms that were closed to the public and lacked sufficient channels to sell the products. Examples were observed at Fresh Water Farm and Green Valley Farm. The lilikoi ice cream served to the Japanese tour group mentioned above was made at neighboring farms and made available to visitors at Fresh Water Farm. At Green Valley Farm, cheese and butter made at a nearby cow farm, kombucha made by a local company, and other artisan crafts made by independent local artists, were sold at their farm store.

Farm Stall/Store

The farm stall is a very common form of farm tourism in Europe, Australia, New Zealand and mainland USA (Busby & Rendle, 2000). However, in Hawaii, especially on Oahu, it is not very common. While driving on the west side and near the North Shore, where most of the farms are located on Oahu, the author occasionally observed one or two booths selling picked mangos along the highway. During the participant observation, a farm stall was found at Purple Flower Farm and Blue Sky Farm.

Once a week, Purple Flower Farm would set up a farm stall on the farm, and visitors who knew about it or heard about it from friends would go and buy vegetables on the farm. At Blue Sky Farm, the produce was sold with other value added products at the farm cafe. So while the visitors were waiting to order or waiting for their food, they would look at and try other products, thereby boosting sales.

At Green Valley Farm, a comprehensive farm store opened during the participant observation. The store sold farm produce and value added products, as well as value added products from other farms and local companies and independent artists.

Cafe on Farms/Catering

Farm cafes were found at both Blue Sky Farm and Green Valley Farm. At Blue Sky Farm, the cafe was the main revenue driver and attracted most of the visitors. The cafe sourced ingredients from their own five-acre farm, as well as the surrounding farms. At Green Valley Farm, the cafe was built on the farm, although managed by a different department of the organization, and sourced most of the ingredients from the farm.

Catering was found at Fresh Water Farm and Purple Flower Farm. At Fresh Water Farm, farmers took orders from customers to make large amounts of food for organizations and took requests from visitors to have dining events on the farm. At Purple Flower Farm, farmers collaborated with a local chef and devised a dinner menu, and hosted an on-farm dinner once a month. Invitations were disseminated through email blasts to previous visitors and friends and families.

The food produced on farms can be converted into various products and sold through various channels. Moreover, the four type of products described above are closely interrelated. For example, food tasting can serve as a pre-sale for the value added products and the products sold in the store and the cafe to boost sales. The more closely these types of products are interrelated, the greater the sales.

3. Bio-diversity

> I was walking around and I saw, you know, Swiss chard and a couple more stuff they have, passion fruit, pineapple and kale, so it's... see a little..and everything seems to be fresh and beautiful… (Freya, visitor to Blue Sky Farm).

During the participant observation, the author met Freya in the fields at Blue Sky Farm, where she was taking a selfie with a lilikoi flower. Later in the interview, she told the author that it made her feel so nice and fresh to walk around the farm and see all the different plants. Similar patterns were also observed at Green Valley Farm, where customers finished lunch in the cafe, and then walked around the farm and talked with farmers working in the fields.

A commonality among the four observed farms was the feature of biodiversity. Different types of vegetables were grown together with fruit trees. At Fresh Water Farm, although their main crop was taro, they also grew many trees and sugar canes, and raised chickens, fish and goats. Moreover, due to the natural wetland feature and well-preserved grass system, several types of water birds inhabited Fresh Water Farm, providing excellent bird watching and educational opportunities.

The natural environment created by this biodiversity contributes significantly to the attractiveness of the farm, and is closely related to the Landscapes category. The plants and animals on the farm also serve as passive "hosts" in addition to the farmers showing visitors the beauty and freshness of the farm. When the author asked visitors if they had any interaction with the staff at the farm, some answered, "yes, pineapples". Even though they were half joking, it is clear that these visitors considered the plants and animals to be very important components of the farm.

Efforts to enhance visitor contact with plants were observed at Blue Sky Farm. In addition to planting vegetables in the fields, which were a little distance from the cafe, the farmers planted some sample vegetables in raised beds around the cafe, and rotated the plants once or twice a week. This served as a good display and educational area where visitors who did not walk around the farm could have close contact with the plants and learn how they grow. This purposeful planting was also noticed and mentioned by some visitors who had visited the farm several times.

4. Traditions

History and culture have been discovered to be important components of farm-tourism (Busby & Rendle, 2000). In Hawaii, the history and culture that can be related to farms are Hawaiian culture, the Hawaiian traditional farming system, the tropical agricultural system, and the farm's own history and culture.

At Fresh Water Farm, due to its major practice of growing taro and pounding poi, Hawaiian culture and traditional farming were naturally integrated into the farm. Moreover, Bella, one of the farmers, had studied the Hawaiian language, practiced hula for years, and was also a hula kumu (teacher in Hawaiian), while David, Bella's husband, was a ukulele maker and played Hawaiian music. Although these cultural elements were not yet fully developed at the farm, it was in their business plan for expanding the farm.

At Blue Sky Farm, the family history and farm culture were incorporated into their logos and even food. Most of the food, salad dressing and deserts sold in the cafe were featured in grandma's recipe, illustrating the long farming tradition and history of this family farm. At Green Valley Farm, the history and mission of the entire non-profit organization was introduced during farm tours and articulated on most of the brochures. The cultural dimension was not observed on every farm, but when it was integrated into farms, it made them more unique and memorable, and helped integrate the other resources together around this cultural dimension, amplifying the awareness and recognizability of the farm.

5. A Holistic Farm Resource Structure

The aforementioned four categories of farm resources configure the entire farm resource structure. These resources were closely interrelated and interdependent. Landscapes served as the backdrop of the farm, providing the general sense of place, but it became more impressive and memorable with bio-diversity woven into this backdrop. The farm-fresh food became more

relatable when the bio-diversity was apparent to visitors. Traditions added another deeper social layer to the farm, and made the other resources more authentic and recognizable.

One resource mentioned in most of the farm-tourism literature and that serves as the main component of farm-tourism in Europe, but was missing in Hawaii due to strict zoning regulations, was accommodations, such as B&B, self catering and farm-stays (Hegarty & Przezborska, 2005). Especially with Airbnb becoming increasingly popular globally, different types of accommodation experiences are becoming possible and desirable. Farm-stays are something missing in Hawaii but could have significant benefits for small family farms. Moreover, staying on the farm is also a way to connect all the other resources to the visitors, make them stay longer on farms and learn about and appreciate farming and the natural environment more.

Another concept that emerged from the study was farms as destinations versus farms as attractions. The model of a farm as a destination was observed at Green Valley Farm. Due to its special position as part of a non-profit organization, the farm was connected to a cafe and retreat center. These three components, along with all the other farm activities, made the farm a destination where visitors could not only stop by but also stay at the farm for a couple of days or even a couple of weeks. In contrast, the other three observed farms served more as attractions in which visitors stopped by for a couple of hours for specific purposes (e.g., dining, touring, education or recreation). Farms as attractions are more determined by location, convenience and special activities, whereas farms as destinations are more determined by their internal resource integration and the richness of the whole farm system.

Nevertheless, due to some internal managerial and communication issues, the linkages between the three aforementioned components at Green Valley Farm were not strong. Visitors who came to the retreat center were not informed of the farm tour and participation opportunities; whereas visitors who came to volunteer or tour on the farm were not necessarily informed about the retreat center facilities. If these linkages could be strengthened, the attractiveness of Green Valley Farm as a whole would be increased. This also sheds lights on the importance of integrating the resources into a holistic structure.

In summary, the four types of resources identified in this study became more evident as farm tourism evolved. The concept of multi-functionality of farms posited in this study was first proposed in the International Assessment of Agricultural Knowledge, Science and Technology for Development in 2009 (International Assessment of Agricultural Knowledge, Science and Technology for Development, 2009), and the term was used to

> express the inescapable interconnectedness of agriculture's different roles and functions… [it] recognizes agriculture as a multi-output activity producing not only commodities (food, feed, fibers, agrofuels, medicinal products and ornamentals), but also non-commodity outputs such as environmental services, landscape amenities and cultural heritages.

This statement accords with the findings reported in this chapter. It was also stressed that it is necessary to integrate these interrelated resources into a holistic farm resource structure and develop products built upon this structure. Some resources were identified as serving more economic outcomes; others were more long-term socially and culturally outcomes. To integrate economically oriented resources and socioculturally oriented resources, and to configure the resources in a holistic way that is economically sound, environmentally friendly, and culturally embedded, is a worthy goal for farmers and all other stakeholders.

CHAPTER 6: VISITOR MIX AND THEIR DYNAMIC ENGAGEMENTS

This chapter primarily presents the nature of visitors who visited farms for recreational or educational purposes, and their perspectives on farmers and farms, in fulfillment of the third objective listed in Chapter 1. According to the literature, studies that attempt to understand farm visitors are inadequate (Carpio, Wohlgenant & Boonsaeng, 2008). Among the few visitor-oriented studies on farm tourism, none divided visitors into local visitors, independent tourists and group tourists. Due to its particular setting as an remote island in the Pacific, the Hawaiian island of Oahu has a very clear differentiation between local residents and tourists. This differentiation was manifested by the mix of farm visitors. To further identify this differentiation and generate associated insights, this chapter disaggregates the visitor mix into Local Visitors, Independent Tourists and Group Tourists, and describes the unique characteristics and values of each group. In addition, this study discovered that farm visitors had a close relationship with locally grown food. These results are presented in the second section. The last section documents visitors' different levels of engagement with farmers and farm resources. This engagement is categorized as passive engagement, little engagement, partial engagement and full engagement based on visitors' interactions with farmers and farm resources, which is insightful for further product development in farm tourism.

1. Local Visitors

> Basically when we first started off, it was 97% of locals, and 3% tourists. Very very very high support from locals, very little visitors [tourists]. But slowly we are seeing more and more and more visitors [tourists] coming… so maybe 60% locals and 40% visitors [tourists]. (Annie, farmer from Blue Sky Farm)

Similar to what Annie described, local visitors were observed to be the largest clientele group across two farms other than Fresh Water Farm. The latter dealt mainly with Japanese group tourists. This strong component of local visitors was also observed in Leco, et. al.'s (2012) study in the Spanish region of Extremadura, where 85.2% of the farm-tourism visitors lived in the same region.

Local visitors represented diverse walks of life, including teachers, students, retirees, full-time workers, families with children, friends, and couples. They participated in diverse activities, including volunteering, touring, participating in a school field trip, dining, shopping, and attending workshops and special events.

Two general patterns were observed among visitors. Those who lived closest to the farm most frequently visited it, and the more diversified in visitor-related activities and components the farm was, the more likely visitors were to re-visit it. Another pattern apparent from both participant observations and interviews was that local visitors were either with visiting family members and friends from the U.S. mainland or other countries or were very willing to bring their family members and friends to the farm. Ingram (2002) found that such visitors were the ones that farmers felt most comfortable dealing with and recommended farmers continue to target this segment.

2. Independent Tourists

Another group of farm visitors were independent tourists. Such visitors were mainly observed at Blue Sky Farm and Green Valley Farm, mostly due to the cafes present. Most of the

independent tourists were multiple-time visitors to Hawaii. When asked how they found out about these farms, they all implied that they were looking for something local and special.

> Allen: The local recommended it, so we came.
>
> Author: Who recommended?
>
> Allen: Some random local. As we asked where to eat, she recommended this place. (Allen, visitor to Blue Sky Farm)
>
> I was just...driving, stopping by, see what's interesting, try to get as many experiences as possible, right? (Freya, visitor to Blue Sky Farm)

Allen was visiting Hawaii for the third time, coming to visit his girlfriend, who was taking a half-year internship in Hawaii at that time. They found the farm cafe through the recommendation of some "random local". Freya was visiting Hawaii for the second time. The last time she visited Hawaii, she only explored Waikiki, so this time she rented a car and was driving around seeking new experiences.

Similar patterns were observed at Green Valley Farm. The author interviewed a group of Japanese tourists. Daniel, the leader of this group, told the author that it was the fifth time he had visited the farm cafe. They were time-share owners in the Ko'olina resort area and Daniel first found the place by asking the manager of the resort to recommend places to visit. Since then, every time he returned to Hawaii he visited the farm cafe and sometimes brought friends with him. When asked if they knew about the tours of the farm, they answered in the negative, but indicated an interest in participating in such tours.

Due to the convenient location of Blue Sky Farm, most tourists came for meals at the cafe either on their way to or from the North Shore. Some tourists found the farm by searching

the Internet for available unique activities they could enjoy on the North Shore. This illustrates that awareness of farm products is crucial for this type of farm visitor, and this corroborated Leco and others' (2012) conclusion that tourists lacked knowledge of the environment and the existence of farm-tourism products, on account of inadequate information and promotion.

In the case of Green Valley Farm, due to its remote location, the Ko'olina resort area was the closest source of this type of tourist, and their interest in authentic local experiences such as visiting farms was identified through participant observations and interviews. However, lack of information was the strongest barrier hindering the flow of tourists from the resort area to the farm.

3. Group Tourists/Tour Operators

Group tourists were mainly observed at Fresh Water Farm and once observed at Blue Sky Farm. Farms obtain access to this type of tourist through contracts with tour operators.

This type of tourist is large in number but has little opportunity for independent activity or interaction with farmers. The quality of the tour is mostly controlled by the tour guide. When Bella and David from Fresh Water Farm were asked how they felt about Japanese tour groups, they answered:

> They [were] touched sometimes, yeah, but.. depends on what mood. But.. I mean he [the driver/tour guide] is knowledgeable about Hawaii… I guess it would depend on the driver and what they push or the agency wants them [to] push…. (Bella and David, farmers from Fresh Water Farm)

Tour operators have their own theme and schedule for the group tour. However, when the theme or schedule is inconsistent with what the farmers want the visitors to feel and learn, confusion and dissatisfaction among visitors can ensue and collaboration between farms and tour operators can break down. These failures occurred at both Green Valley Farm and Purple Flower Farm, as Benjamin and Frank described it:

> [Tour companies] have a lot of problems. They just never got the numbers… they brought down all the [tour companies'] bosses… they loved it. But they didn't bring any of the people who [were] at the desk trying to sell it. So… you just like "oh, we got farm tours, it's great". But they couldn't sell it correctly (Benjamin, farmer from Green Valley Farm).

> The tours were not really making us enough money. They were... it was you know, the numbers of people that were coming over wasn't very steady, and then... the [tour company] people that I worked with were very rigid, you know, they were not flexible when there is something that we needed to make some changes they were very strict and so... I had to.. you know end it (Frank, farmer from Purple Flower Farm).

This failure is also apparent from Cox and Fox's (2003) study of agriculturally based attractions in Hawaii in 1991. They found most of the agricultural based attractions were visited by package tourists. However, 25 years later it is clear from the present study that package tours related to farm tourism have still not reached their full potential.

Another concern associated with group tourists was observed at Blue Sky Farm. A large tour bus carrying about 48 baby boomers entered the cafe area during the lunch rush hour. Although the group was separated into a different dining zone and the speed of other customers' ordering was not diminished, the large influx of visitors nevertheless aroused a strong feeling of crowdedness in other customers. Moreover, the driver/guide spoke loudly about the fresh food produced on the farm to ensure everyone in the group could hear him, and was apparently heard very clearly by other customers. Because of the large number of tourists associated with this type

of farm visitor, farmers must consider the balance between the group tourists and the other two types of visitors.

4. Visitors and Locally Grown Food

As mentioned in Chapter 4, farmers in Hawaii face two major issues: 1) the disconnection between the public and the farm land, and between the public and the local food system, and 2) the competition from massively produced low-priced imported food in Hawaii. With these two factors combined, it was difficult for local smallholders to sell their produce. This study found that the visitors who visited these farms, which open to the public, had some sense of locally grown food, but their experience thereon further enhanced their awareness and understanding of the local food system.

Angela was visiting Blue Sky Farm for her first time and participating in the farm work as a volunteer when the author interviewed her. She told the author that her experience on the farm was eye-opening and made her learn more about locally grown food. When asked her opinion on locally grown food, she said,

> I think... I ... the first thing I'll look for is local. And then "oh dude, where is the organic sticker" (laughing..), you know. But after all I would look towards more… local… I mean that's the first draw for me. But now I am definitely more aware of it. But in prior, you know, if I see, that will stick out more, the local... sticker... I mean locally grown sign or whatever. (Angela, visitor to Blue Sky Farm)

Angela articulated that she paid attention to local food and identified it by the “locally grown” stickers and signs, but with her experience on Blue Sky Farm, she realized that locally

grown food was not merely about the food with "locally grown" stickers, but also involved local farms, farmers and their struggles farming in Hawaii.

For local visitors like Angela, buying local food was something they were aware of from the popular press. However, without fully understanding the local food system and the struggles of farmers and farms like Blue Sky Farm, their awareness of the local food system is disconnected from the land and local farmers. However, learning more about local food growers and their struggles made this awareness more relevant. Thus, the personal connection that these visitors derived from their interactions with farmers and farms made their daily action of "buying local" more profound and justified.

For tourists who visit Hawaii, tasting locally grown food comprises part of the authentic experience. As Freya remarked,

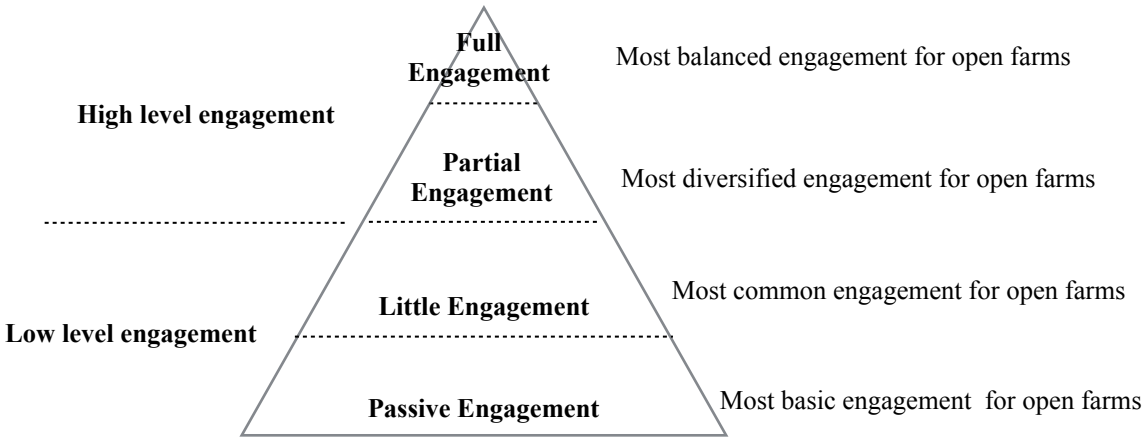
> When I was in Hawaii, actually I was mindfully buying local produce, so when I went to the supermarket, I try to find the local papayas verses the one from Mexico, or local avocado, like just to really get a taste of the island, you know…. (Freya, visitor to Blue Sky Farm)

Similar to Freya, buying local food and actually seeing how it grows was part of the interests of most tourists interviewed by the author. Leveraging on tourists' interest in local food through participation in farm tourism will further channel tourists' dollars back to the local agriculture industry through grocery shopping, visiting farmers' market and patronizing local restaurants during tourists' stays in Hawaii.

5. Different Level of Engagement

Different levels of visitor engagement on farms were observed. Based on how much engagement visitors had with the environment, the land, the plants/animals and farmers, these engagements were categorized as: passive engagement, little engagement, partial engagement, and full engagement. The basic structure of these different level of engagement is portrayed in Figure 6.

Figure 6. Different Levels of Farm Resource-based Visitor Engagements



Passive Engagement

Passive engagement was observed as visitors simply walking around the farm by themselves or immersing themselves in the farm environment. This type of engagement usually does not occur alone and is always associated with other types of engagement, but serves as the basic engagement an open farm, which opens to the public through farm tourism, can offer. Therefore, facilitating visitor access to farm resources, through such means as signage, plant name labels, and walkable paths between fields becomes critical. Visitors also need to be

informed that the farm is open to the public and encouraged to ask questions and to push heighten their engagement level.

Cathie, visiting for the fourth time with her children at Blue Sky Farm, told the author that she felt the farm should offer free tours. This could be a good way to elevate passive engagement to higher levels, perhaps offering once-a-week 15-minute free walking tours on certain routes and briefing participants on the farm's character, history, plants and products. This could, in turn, encourage visitors to more deeply engage with the farm.

Little Engagement

Little Engagement, such as taking meals at a cafe or shopping at a farm stall or store, was observed most frequently. This type of engagement includes some active interactions with farmers or farm staff. Little engagement was observed as the most common one among visitors. Although little engagement may attract the most visitors and generate the most revenue, if farms only provide this type of engagement and use the farmland merely as a backdrop, farm tourism can be easily commercialized and can impel loss of the farm's authenticity. On the other hand, this type of engagement can be most readily upgraded to higher levels due to a high rate of repeat visitation.

Visitors at this level of engagement can be viewed as prospective high-level engagement visitors, especially those who visit the farm frequently. Such visitors need to be informed of the availability of high-level engagement activities, and the benefits they could expect from

participation, such as learning basic gardening skills through a workshop or receiving discounts for meals or products by volunteering.

Partial engagement

Partial engagement was observed as visitors taking tours, participating in educational field trips, festivals, workshops, and other events, and engaging in customized activities like gathering, team building, and fine dining. This type of engagement involved interactions with farmers, the land, and the plants, and could be developed into various activities appropriate to this level of engagement. However, this type of engagement can potentially consume most of the resources of the farm, including labor, capital and materials, and can significantly interfere with farmers' daily operations.

Full engagement

Full engagement was observed as volunteering or a farm stay, in which visitors had maximum engagement with the farm environment, farmers, plants, and the land. Due to lengthy visits but small visitor numbers, the one-time resource input is not as great as with partial engagement. In addition, its high rewards in terms of either donated time or sales revenues compensate for these resource inputs. Moreover, with full immersion and active engagement, visitors obtain a better understanding of the farm, farm work and farmers, so the social benefits brought also exceed that of other levels of engagement.

In summary, a general picture of visitors who visit farms for recreational or educational purposes has been presented in this chapter. Local visitors were identified as comprising the largest proportion of farm tourism patrons, and they viewed farm tourism as an important outlet to get closer to nature and understand more about the local food system. Local visitors also served as an interpersonal communication medium to connect farm tourism products with their friends, relatives and off-island tourists. Most of the independent tourists were multi-time visitors to Hawaii, looking for new and authentic experiences. Farm tourism well met their needs, but was not well-known among them. Group tourists were mainly non-English speakers, such as Japanese and Chinese. Due to language barriers and the unfamiliar environment, their expectations for farm tourism and the quality of their farm tourism experiences depended heavily on tour operators' marketing and interpretation. The failure of close communication and mutual understanding between farmers and these tour operators led to the disintegration of cooperation between them. This study also identified visitors' different levels of engagements with farmers and farm resources, providing insights into further product development and resource re-utilization.

CHAPTER 7: CHALLENGES AND OBSTACLES TO FARM TOURISM

The issues and challenges faced by farmers when they attempted to incorporate touristic elements into their farms are discussed in this chapter. The first issue that was identified both from the literature and legal documents and the field research was the confused concept of farm tourism. As mentioned in Chapters 1 and 3, this issue is not unique to Hawaii. However, the findings of this study implied that without a shared understanding of farm tourism, it was very difficult to make collective efforts to develop farm tourism effectively and efficiently. This study sought evidence from the literature and legal documents, and analyzed both farmers' and visitors' perspectives to address this issue. In the third section, challenges and obstacles hindering the further development of farm tourism are addressed, in fulfillment of objective #4.

1. Confusion about Agri-tourism and Farm Tourism

Farm tourism is defined as a subset of agri-tourism in this thesis, in which visitor-oriented activities occurring on working farms are considered farm tourism and those occurring off working farms, such as farmers' markets and agricultural festivals, are considered agri-tourism. However, when the author searched for existing documents that carried definitions of either agri-tourism or farm tourism, only the term "agri-tourism" was mentioned. Examples could be found in United States Department of Agriculture's (USDA) documents and Hawaii legislation.

According to the USDA, agri-tourism is equated with recreational services on farms, including hunting, fishing, farm or wine tours, hay rides, etc. (United States Department of

Agriculture, 2014). With respect to State legislation, Hawaii Revised Statutes Chapter 205. Land Use Commission (Hawaii State Legislature 2015) defines agri-tourism as an activity,

> conducted on a working farm, or a farming operation as defined in section 165-2, for the enjoyment, education, or involvement of visitors; provided that the agricultural tourism activity is accessory and secondary to the principal agricultural use and does not interfere with surrounding farm operations (205-2-d-11).

This, however, was how the author defined farm tourism, rather than agri-tourism, for purposes of this study. Despite the definitional gap between this study and existing legal documents, the term "agri-tourism" instead of "farm tourism" was used in this study under the assumption that the former would be a more commonly accepted term among farmers and visitors. However, to the author's surprise, the term "agri-tourism" was neither commonly used nor perceived. Moreover, the descriptions and perceptions of "agri-tourism" among both farmers and visitors were closer to the definition of "farm tourism" proposed herein. A Detailed discussion of such confusion follows.

Visitors' Perceptions

During interviews with visitors, questions about perceptions of agri-tourism were asked, and interviewees were asked to describe the term based on their own understanding and experiences. To the author's surprise, most of the visitors had very similar perceptions of agri-tourism. The following illustrates visitors' views of agri-tourism:

> agri-tourism is a new movement that provides the opportunity for people, visitors and local people to see the working in the farm, see how farm worked, provides an opportunity for touring, especially for kids to even know how their food was grown. This is what banana tree looks like, you know, how pineapple grows, whatever. but… and then the bonus of that to me beyond the educational aspect and the other is that they do

> provide an opportunity to enjoy their food, like this place does. (Emma, visitor to Blue Sky Farm)

"Education", "informative tours", "learning how different plants grow", "to know how a farm is operated" and "to know where food comes from" were the most commonly mentioned words and phrases. This corroborates Arroyo et. al.'s (2013) study, which concluded that "agricultural setting", "entertainment", "farm", and "education" should be included in a definition of agri-tourism.

Further corroborating Arroyo et. al.'s (2013) study was the view that activities offered on non-working farms or where the agricultural setting only served as a background for recreational pursuits should not be considered agri-tourism. One visitor, when asked if she had visited other farms on Oahu before, said:

> Well..there is a XXX's [ranch's name] ranch, is that kind of a park? I don't know… it is very touristy. I didn't really go there for the purpose of farm or… you know, the agricultural perspective… I did the ATV there." (Hailey, visitor to Blue Sky Farm).

To these visitors, the first half of the term "agri-tourism" was closely related to farm productions. The sense of authenticity and the sense of place associated with working farms constituted the core of the farm experiences that these visitors sought. However, when non-working farms and off-farm activities are combined with working farm activities, and packaged together into the term "agri-tourism", it is difficult for visitors seeking such authenticity and sense of place to identify "farm tourism" among all the agriculturally based activities. Therefore, it is important to understand the nature of farm tourism and establish clear definitions of farm tourism and agri-tourism to implement successful marketing campaigns.

2. Confusion about Visitors and Tourists

Another confusion observed pertained to whether local residents should be considered part of "agri-tourism". As mentioned in Chapter 6, local residents comprised a significant portion of farm tourism patrons. However, due to farmers' lack of knowledge of tourism and the complex nature of tourism and tourists, contradictory perception of "agri-tourism" among farmers was observed.

Farmers' Perceptions

Due to the non-existence of the word "farm tourism" in existing legal documents in Hawaii and identification of only the term "agri-tourism" prior to this study, the author used "agri-tourism" during the interviews with farmers without defining it. The interview results clearly showed two different perceptions of agri-tourism. One perception of agri-tourism was the uncertainty about whether agri-tourism only pertained to tourists and marketing to tourists and hotels or local visitors can be counted into agri-tourism. This was demonstrated in the interview with Frank, a farmer from Purple Flower Farm:

> Author: [talking about the on-farm dinner] But do you consider that these kinds of dinners as part of the agri-tourism?
>
> Frank: no...not really..it's a kind of event that could be agri-tourism, but the people that are coming here are mostly people within our own network of friends and people that… most..everybody that's come lives here, they are not tourists. They are interested in the farm, they want to support the farm, so that's why they come. (Frank, farmer from Purple Flower Farm)

Due to the lack of shared understanding of agri-tourism and not being experts in either tourism or this specific type of agri-tourism business, farmers' first perception of agri-tourism is

constrained by a vague impression of agri-tourism as being a combination of agriculture and tourism. However, as farmers noticed, local visitors were an important part of the clientele. The evidence was also observed from the same interview with Frank:

> But agri-tourism in my mind is more something like you are marketing to a broader public, and so there's..and it's not really tourism, so you can either market it to people that are local here who are living in Hawaii which I wanted to do, and then you can do things that actually real tourists that come here… you know we can have the entertainment and do something that's a little bigger. and .. you know, that could possibly be agri-tourism (Frank, farmer from Purple Flower Farm).

This self-disclosure shows a contradictory view of agri-tourism, even within the same individual. On the one hand, agri-tourism should be open to a broader public; on the other, "real" tourists need to be incorporated into agri-tourism in order to make sense of the term "tourism". This is not necessarily two conflicting points, since both locals and tourists can be included under the umbrella of agri-tourism. However, for some farmers who lack clear knowledge and perception of agri-tourism and tourism, the two terms tend to be perceived as synonyms, making it difficult to define agri-tourism in their minds.

Another perception of agri-tourism was a new business model for running a farm with both locals and tourists as target markets and education as the biggest component. A further distinction between the farmers who hold the first perception and the ones who hold the second are that the former consists of farmers who have been farming for a long time, and are busy with field production, and want to incorporate the word "agri-tourism" into their daily operation, while the latter consists of farmers who are new to farming and want to start a farm based on the model of agri-tourism. Thus, this distinction is rooted in the structure of farms. This is consistent with the findings reported in Chapter 4, that farm structure can influence farmers' identity and

perceptions, and hence influence their decision making. Nevertheless, these findings imply that despite the confusion about “visitors” and “tourists”, it is clear that farmers consider local residents and the local community as very important components of their tourism business.

In summary, confusion about the definitions of agri-tourism and farm-tourism clearly exist in both farmers and visitors. Farmers gave their own definitions, and visitors had their own perceptions. Different definitions were also encountered in government regulations and documents. This confusion and lack of shared understanding of farm tourism was also identified in Arroyo et. al.’s (2013) study comparing the perception of agri-tourism among different stakeholders in Missouri and North Carolina. This lack of shared understanding creates confusion and diminishes agri-tourism’s appeal among consumers, hindering communication and collaboration among stakeholders (Arroyo et. al., 2013).

Arroyo and others (2013) also recommended qualitative inquiries to develop a more insightful shared understanding of agri-tourism. Although defining farm tourism was not the focus of this study, grappling with this issue was unavoidable. Consequently, it might be helpful to conduct research designed to yield a clearer definition of both agri-tourism and farm-tourism in Hawaii that can be shared by different stakeholders, based on the results of this study.

3. Obstacles

Other than the confusion about the definitions of farm tourism, some other obstacles were faced by farmers that prevented them from further developing farm tourism.

Conflicts with Daily Operational Routine

> We tried to do that with the Japanese tour group… they used to come over here. Yeah, but...so but..it's too much work to do that, I wanted to be sure to get the farm foundation well established. (Frank, farmer from Purple Flower Farm)

For a production oriented farm like Purple Flower Farm, opening the farm to the public and inviting people to visit the farm can seriously disrupt daily operational routines, if the visitors' activities are not well designed and controlled in terms of time and number of visitors.

This challenge was also faced by Blue Sky Farm with respect to their volunteer activities. Farmers needed to plan ahead about what kind of work could be done by volunteers. Moreover, the type of work was also dependent on how many people actually showed up. Sometimes, insufficient people showed up, so the planned work needed to be rescheduled. This requires farmers to be flexible. However, for a production-oriented farm, farm work is endless and usually performed in the most efficient manner. This makes it difficult for farmers to change their routines in order to cater to visitors.

Lack of Committed Capital or Labor

Another challenge associated with the aforementioned conflict was lack of committed capital or labor that can de devoted to the development and management of farm tourism.

> It shouldn't be the farm manager's responsibility to take care of that [agri-tourism], you know. There should be a separate position for someone being able to control that. But… it's really hard because to pay someone to run a position, that should be a good-paying job for someone. But without the proof of profitability of that system being run, it's hard to convince the board to put it in investment (Chuck, farmer from Green Valley Farm).

The concern and conflicts addressed by Chuck from Green Valley Farm shows that although farm tourism is believed to have enormous potential, the lack of committed employees who know how to manage farm tourism is preventing farms from developing farm tourism. Moreover, the uncertainty of the profitability of farm tourism as an emergent business is preventing farmers from investing in either labor or infrastructure, further inhibiting development of farm tourism.

Other Obstacles

Other than the conflicts mentioned above, some external obstacles are also preventing farm tourism from developing, including zoning restrictions of agricultural land development, building permits, high land costs and community/cultural opposition. These same obstacles were also observed in Hawaii Agricultural Statistics' (2008) special publication on Hawaii Ag-tourism in 2006. The report found that zoning restrictions were the number one problem, and building permits the third most common problem.

CHAPTER 8: CONCLUSIONS AND RECOMMENDATIONS

1. Farm Tourism: An Open Farm System

This study explored and analyzed the nature and practices of farm tourism at small-scale farms on Oahu by conceptualizing and examining the relationships between farmers, farms and visitors, and their interactions with the external environment. It shows that by opening up farms to the public through farm tourism, the conventional role of farmers as food providers and hard laborers is altered, farms' traditional resources are re-utilized and new resources are identified, and visitors' understanding of farming and food production is deepened. These changes stimulated by farm tourism are creating a dynamic open farm system.

This open farm system is a relatively new concept in comparison to the traditional farm system. Traditionally, farmers who live and work on their own farms sustain a self-sufficient lifestyle. This self-sufficient system is subordinate to, but relatively independent from, the larger social-exchange system in which people frequently interact with each other. Within this semi-closed and subordinated farm system, farmers only interact with the superordinate system occasionally. In Hawaii, this semi-closed farm system dominated the entire Hawaiian archipelago until the 1950s, when the tourism industry started booming and interfering with other economic sectors (Philipp, 1953). As Cox and Fox (1993) discovered, the further development of the tourism industry in Hawaii generated new demand for agricultural products, and in response, farmers shifted their farming tradition and started producing new crops and interacting with tourists (Cox and Fox, 1993). However, these linkages between agriculture and tourism found in the late 1980s were primarily flowing at the economic and market-oriented

level. Farmers and farms' interactions and exchanges with the society were mostly still through the produce and production.

The open farm system identified in this study contains not only economic exchanges, but also social and cultural exchanges with other social groups. In the context of farm tourism, an open farm inviting the public to visit is analogized to an open book. Farmers and visitors are both writers and readers of this book and constantly revise, redesign, and redefine farm resources. This study has found that farm resources were identified and utilized by farmers or visitors for educational, recreational, cultural, food service, and event purposes consumed by visitors through different levels of engagement. In addition, through interactions with visitors and managing new farm resources, farmers were no longer considered mere farm producers, but also service providers, educators, culture disseminators and managers. In this open farm system, more and more social and cultural aspects were revealed. These findings corroborate those of other studies that show that the benefits of farm tourism are not only economical but also sociocultural and environmental. As Barbieri (2013) stated:

> agritourism… can be translated into preserving the farmer's historic ties to the land and traditional knowledge, employing stewardship and sustainable agricultural practices, increasing farm revenues and profits, sustaining the landscape, habitats and soil productivity, preserving the family farmland for future generations and sustaining rural economies.

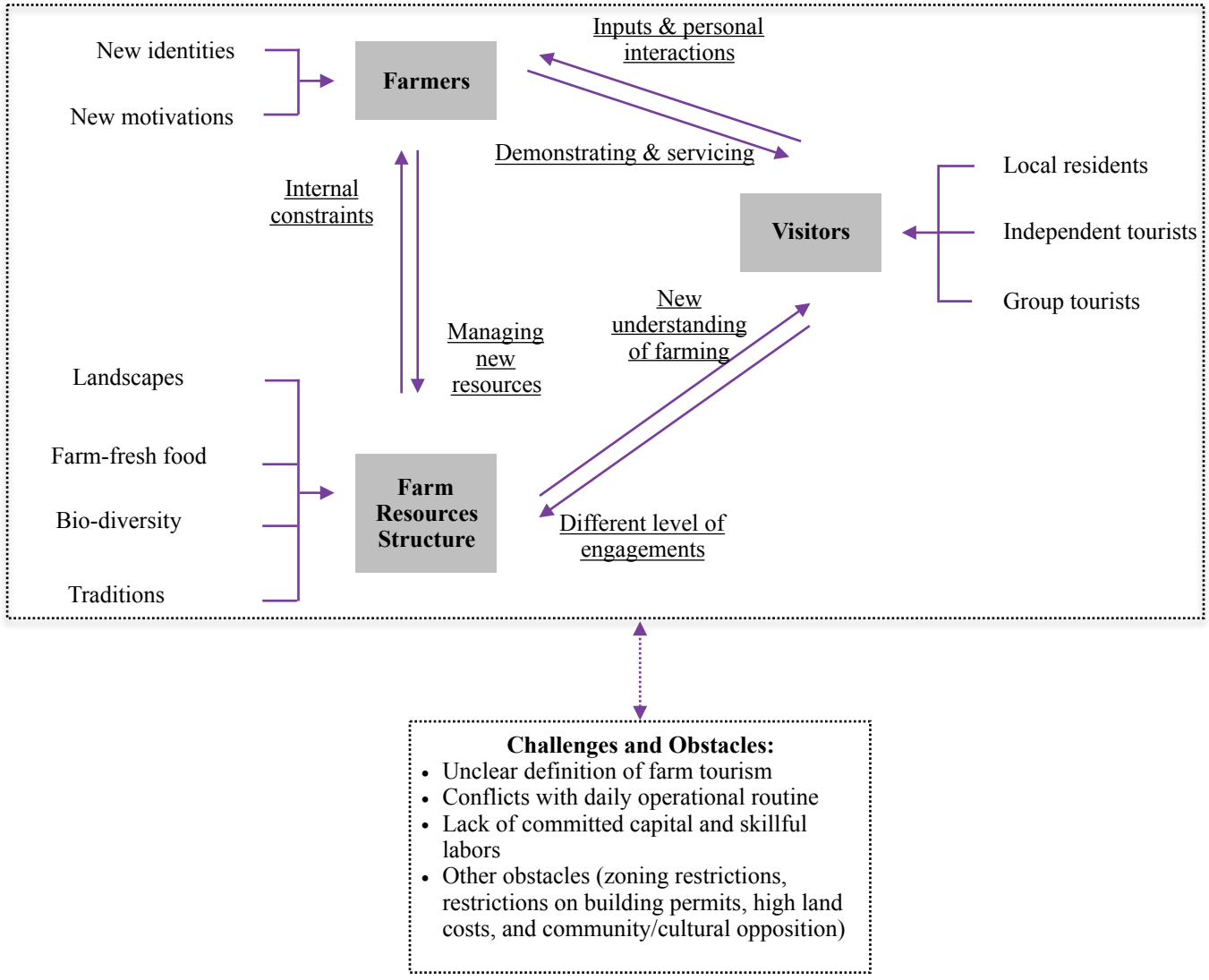
However, the open farm system is not without challenges. Due to a lack of shared understanding of farm tourism and training in specific people-oriented skills, farmers have trouble adopting new identities and managing farm resources for farm tourism. Moreover, the lack of funding, investment and skilled labor, and legislative constraints also prevent farm

resources from being re-structured. In addition, a lack of effective marketing is preventing visitors from becoming aware of open farms on the island.

To further articulate this open farm system and the challenges faced by it, a flow chart is presented in Figure 7 and interpreted below. As farms open to the public and farmers increasingly interact with other social groups, farmers' self identities and associated motivations for operating a farm are changing. Although the adoption of new identities is constrained by the existing farm structure, the new identities and motivations also provide farmers with new perspectives on farm resources, thereby encouraging them to adopt new managerial approaches to re-shape the farm resource structure. Such re-shaping of the farm resource structure is essential to the open farm system. The new farm structure includes four interdependent components: landscapes, farm-fresh food, bio-diversity and traditions.

Visitors coming from the local area and off-island either as independent tourists or group tourists interact with the farm resources with varying levels of engagement. Such engagement ranges from passive engagement, in which visitors only have passive interaction with the landscape and environment, through little engagement and partial engagement to full engagement, such as volunteering or farm-stays, in which visitors fully engage with the land, farmers and all the other resources. Visitors' full engagement will lead to their full understanding of farming, thereby enhancing the sociocultural impacts of farm tourism.

Figure 7. Open Farm System through Farm Tourism on the Hawaiian Island of Oahu



Visitors interact with farmers as well as farm resources through demonstrations and service providing, farmers help visitors better understand farm resources and agricultural practices. In return, visitors provide farmers with inputs of money and/or labor.

Arguably, the economic, sociocultural and environmental outcomes generated by the system are implicit yet significant. Through the open farm system, the public gets connected to food growers and local food products, deepening their understanding of farming and the

challenges faced by farmers. This deeper understanding is a first step towards a healthy and sustainable local food system in Hawaii.

2. Implications

The open farm system suggests that farmers who intend to open their farms to the public need to incorporate a broader view of farm resources, market segments and skill sets into their daily farm operations. It therefore will be necessary for farmers to obtain training in marketing and customer service, and to develop collaborations with local schools, tour operators, hotels, resorts, restaurants, and farmers' markets.

Farmers also need to understand that the open farm system may not be able to generate quick money, but in the long-run will be beneficial for their farms through establishing connections with visitors and educating them about local farming and food systems. A study by Nickerson et. al. (2001) suggested that farmers do some soul-searching before going into farm tourism, for it not only requires new skills like marketing, product development and customer service, but also can heavily interfere with farms' daily operations.

Nickerson and others (2001) also found that the authenticity of farm experiences perceived by visitors came from the actual working-farm components. Therefore, keeping the working farm environment is essential in the open farm system. Another concern for farmers is the need to maintain the number of visitors within the capacity of the farm itself and the surrounding community to prevent over-crowding and disturbance to neighboring properties.

The open farm system illustrates that farm tourism interfaces with not only the agriculture and tourism sectors, but also the local food system, zoning system, and community. To further the development of farm tourism in Hawaii, the study suggests that close collaboration among different stakeholders, including the legislature, Department of Land and Natural Resources, Department of Agriculture, Hawaii Tourism Authority, the visitor industry, local farm bureau/union and local communities, needs to occur. Training programs designed to help farmers understand the tourism industry and equip them with the skills required for farm tourism need to be developed. Collective marketing efforts to create awareness of open farms among tourists should be implemented. Streamlined administrative resources for farmers seeking to develop farm tourism products need to be available. Funding and investments in farm tourism development needs to be channeled to the agriculture industry.

Agricultural education needs to embrace this new perspective of farm resources in the open farm system, and equip students who plan to be professional farmers with the necessary skills. Interdisciplinary studies and project-based learning are also necessary to stimulate further development of the open farm system.

3. Limitations of the Study

Although the model of open farm system proposed in this study is applicable and replicable in general, caution is necessary in applying the results of this study to other geographic areas. Due to the limited budget and time, the research focus was only on farms on the Hawaiian island of Oahu.The other Hawaiian islands have different geographic features that make farms on

them different from those on Oahu in terms of farm size, crops grown, and distance from markets and tourist attractions. The visitor mix on the other islands and the farm tourism products that farms may develop may also differ from those on Oahu. Therefore, localized and contextualized nuances and factors must be considered when applying the results of this study to other geographic areas, including other islands in Hawaii.

Another limitation is that the study considered only farms less than 10 acres in size. Most of the smallholders are family and individual owned and tend to be more vulnerable to external turbulence than larger commercial farms, and have different challenges and opportunities.

In addition, farm tourism as the focus of this study is defined as a subset of agri-tourism. It is a specific form of agri-tourism on working farms, and does not include other forms of agri-tourism, such as farmers' markets and agricultural festivals. Therefore, the findings of this study may not be comparable to ones whose focus was on other forms of agri-tourism.

4. Suggestions for Future Research

Given the sociocultural and environmental outcomes generated by the open farm system, it would be useful to replicate this study on other Hawaiian islands and to measure the scope of farm tourism across the state, preferably combining both quantitative and qualitative research methods.

The open farm system model proposed herein encompasses some basic elements of the intersection between agriculture and tourism industries. More elements need to be identified as

farm tourism evolves, and many other external factors that are affecting farm tourism were not included in this basic model. Future studies could use this model as a starting point and identify more internal elements and external factors based on local contexts, and how the open farm system is affecting the external environment, including the agriculture and tourism industries. In addition, given that farm tourism is defined as one particular type of agri-tourism, it would be interesting to study the relationship between farm tourism and other types of agri-tourism, and tourists' perceptions of theses different types of agri-tourism.

The lack of shared understanding of farm tourism among farmers and visitors is identified as an inhibitor of farm tourism development in Hawaii. Therefore, future research could also investigate different stakeholders' perceptions of farm tourism statewide, in order to help achieve a consensual understanding of farm tourism and promote farm tourism in a recognizable and consistent way.

Finally, although organic farming was not the focus of this study, the author found that organic farming provides farms with important advantages in the open farm system. Organic farming makes farms easier to open to the public because farmers do not need to worry about potential chemical hazards to visitors. Moreover, organic farming involves many natural techniques of farming, such as composting and using certain ground-covering crops to fertilize the soil, which can be very practical information to share with visitors and thereby enhance visitation. Therefore, the social impacts and benefits of organic farming in the context of farm-tourism would be a useful subject for future research.

The close relationship between farmers, farms and visitors identified herein indicates that farm tourism provides social and cultural, as well as economic, outcomes. Through the interactions between visitors and farmers, and visitors and farms, the public's understanding of the agriculture industry and the local food system were deepened. However, given the complexity of farm tourism, and its close relationship with its external environment, to successfully achieve the economic and sociocultural benefits of farm tourism a collaborative and integrative effort need to be made by all the relevant stakeholders, including governments, the agriculture and tourism industries, educational institutions, legislatures, third party organizations and local communities.

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APPENDIX A: INTERVIEW QUESTIONS FOR FARMERS

Q1. What made you decide to have this cafe-house at the beginning?

- How did all the other activities come out? The field trip, the tours and the Service Learning Program?

- How do you feel about these activities? Are they fulfilling its initial purposes?

Q2. After five years you've been involved with this new business, what differences do you notice between running a commercial farm and a small farm associated with tourism elements?

- Would you say that having a commercial farm is helpful to the start-up of this new business?

- How would you describe the relationship between the commercial farm and the front area farm, financially and operationally?

Q3. Do you consider yourself as a farmer, or more like an entrepreneur?

- I read from the news online saying that you had a conflict with your dad when you said you would like to come back to the farm, how was that go?

- What made you want to come back?

Q4. Could you simply describe the structure of the staff who are involved with the new business, like who are involved with what and what are their daily job?

- Are there any general meetings, like once a week or once a month to discuss about the following agenda?

Q5. As I noticed, tourism and farming both requires a lot of labors, special expertise, a lot of time and space, how would you balance farming and tourism?

Q6. How did the organic farming concept come out?

- Would you say you are more optimistic, or pessimistic or neutral towards the future of organic farming in Hawaii?
- How would you incorporate the organic concept into daily operation?
- What kind of benefits do you think could be brought to this farm through being organic?

Q7. What do you think is attracting the visitors to come to the cafe, the tours and the service learning program?

Q8. As far as you know, what is the ratio of the locals to the tourists on this farm in general?

Q9. Would you focus more on the local market or the tourist market or the both in the future?

- What would you do to keep the connection with the locals?
- I noticed that there was a tour bus came one day with 40 something baby-boomers, would you consider cooperating with some tour companies?
- How would you attract tourists?

Q10. Are there any aspects of the operation that you would like to improve?

Q11. Are there any challenges that you feel are hindering the development of the farm?

Q12. Do you have any plans for the future to keep this farm as a sustainable business, considering both the front area and the commercial part?

Q13. How would you interpret agricultural tourism?

Q14. Is there anything else that you would like to share that we haven't covered?

APPENDIX B: INTERVIEW QUESTIONS FOR VISITORS

Q1. Do you live on this island?

[if yes]

- How often do you come down to this area?
- What do you normally do at your leisure time, like on weekends or holidays?

[if not, he/she most probably are on vacation or VFR in Hawaii]

- Where are you from?
- Are you just on vacation or visiting any friends or relatives here?
- How long is your total trip in Hawaii?
- Did you visit any other farms other than this one or any kind of farmers' market in Hawaii?

    *would you please talk a little bit more about that experience?

Q2. Have you come to this farm before?

[if yes]

- What did you do last time you came here? When was that?
- What makes you come back to this farm this time?

[if not]

- What makes you come to this farm?

[for ALL]

- Which aspects of the farm do you like the most (so far)?

    *why is that?

- Are there any aspects that you may dislike about this farm (so far)?

    *why is that?

- Did you have any interaction with any staff here?

    *how did that go?

- Would you say that your experience so far does not meet your expectations or exceeds your expectations?

[for those who live on the island]

- Would you feel like coming back again?

*and for what reasons you may come back?

[for those who are visiting Hawaii]

- Would you say that your experience on this farm would me you pay more attention to this kind of farm tourism or come back to this farm again next time you come to Hawaii?

Q3. Did you have any experience related to farming, ranching or gardening before?

* would you please talk a little bit more about that experience?

Q4. How do you feel about organic foods?

[if they showed interests in organic foods]

- Locally grown food v.s. organic food, which one would you care more about when you are doing daily grocery shoppings?

- What do you think this farm could do to better educate people about how they grow foods and where these foods go?

[if they didn't show much interests in organic foods]

*follow up with any possible question or courtesy

Q5. What do you think this farm should do to improve the experiences of visitors?

Q6. My last question would be that "would you please interpret or describe your understanding of 'Agricultural Tourism'?".